The Builder.

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The Teaching at Schools of Art.

SOME of our readers will have observed the letter by Mr. Crace which was printed in our last, one among several which have been addressed to the secretary of the Royal Commission on Technical Education. The subject is one of too much importance to be passed over in our columns without some more special comment, both in regard to the deficiences which are complained of by Mr. Crace and others who are practically interested in decoration, and the possible means by which those deficiencies may be remedied.

The admission that has been made in the letter referred to, that there has been a great advance in public taste of late years, and also in the design of the objects produced, seems at first sight at variance with the complaint that there is no adequate supply of competent decorative workmen to be had from the schools. If it is admitted that there are better things produced than before, who designs or draws them? might seem the natural answer. Probably one reply to this would be that a great deal of decorative work produced at present is mainly imitative of a few types, and these types have been brought into notice and adoption chiefly by the influence of those "few earnest and enterprising artists" who are referred to in Mr. Crace's letter. It is certain that at present there is a great deal of fairly good decorative work produced, any specimens of which would strike us as good when seen separately, but which when seen together appear too obviously the production of a habit of repetition rather than of any original power in regard to either design or execution. And probably this would be the case even if there existed among decorative workmen more innate and original power. The public are mainly to blame for this. Art and artistic things have become a fashion like dress, and a fashion to be just as rigorously followed; and when it is established that this or that style of design is the best thing, every one asks for it, and would feel out of the running without it, and the philosophy of good or bad taste is settled as summarily as we once heard a tailor settle the question of taste in dress: "What's in fashion is good, sir; and what's not in fashion is not good."

This we imagine (with the fact that assistants are obtained elsewhere than from the schools, including foreign countries) to be the explanation of the apparent anomaly, that in spite of an acknowledged improvement in public taste and in production, there is so little power of originating or of working on principle to be found among the decorative workmen of the day. Without very much innate power of design, men can with a moderate amount of ability learn to assimilate and reproduce the forms of decorative work most in vogue; and consequently we see shop after shop filled with the same kind of work, and house after house decorated and furnished in the same style, as if there were no such thing as individuality of taste at all. This is only, however, an offshoot of the real question at issue, which is, why the now rather large and extended means of art-education in England do not avail to produce a higher class of artistic workmen than it appears they do produce. There is a great ramification of art schools all over the country, and a very elaborate system of rewards for various kinds of proficiency, but yet the master decorators affirm that no results are perceptible from all this in the work of the men who come to them from the schools.

It is suggested that the cause lies in the want of special attention directed to the study and practice of ornamental design in the Departmental art schools of the country, both in London and the provinces, and this, we imagine, has a great deal to do with the matter, though we should not be surprised to find that some of the most active of the official coadjutors in the Government system of art-education are of quite a different mind, and would consider themselves much injured by any accusation of attaching too little importance to the study of decorative design. There is no question that the South Kensington Museum has had a great influence upon those who have been brought within its range as a place for study and observation of examples, in promoting a knowledge of and feeling for decorative art; the vast majority of the works purchased and under continual exhibition there, or lent from time to time to provincial exhibitions, are examples of decorative art; sculpture and painting occupying but a very small proportion of the works acquired. In some cases that we have known of, the study of some of these examples has had the effect which it ought to have, in stimulating the attempt to produce new forms of design based upon old ones, but not mere copies; only the other day we were looking at some lace designs from Nottingham, based upon forms of Indian ornament, and produced under that inspiration by an operative in a lace-mill. Unfortunately, it is to be feared that these are rather rare instances; but the fact that there are any such instances shows that there may be the material for producing the proper result of study from existing examples of past schools, if only it were fully and rightly directed.

Why is it not, then, rightly directed? Some of the authorities at South Kensington, we have reason to know, are strongly impressed with the necessity for special study of decorative design, as a branch of art quite different in its conditions from imitative art, even as represented in the highest class of sculpture and painting; requiring special study and special exercise of thought to apprehend its conditions and to work them out to adequate results. But it does not appear that this is sufficiently appreciated by those who have the principal voice in the direction of the studies enjoined, and in passing judgment on the work done. The mistake which is made appears to lie in carrying too far the conviction that the study of nature, and especially of the figure, is the highest end of art, and that this will alone give the power to apply the faculty of draughtsmanship, thus gained, to the production of design in the lesser arts. The production of high-class figure design, in painting or sculpture, is no doubt in one sense the most intellectual branch of graphic art. But the production of equally good decorative design, though it may be a less intellectual form of art than this, is a problem different in kind as well as in degree. It does not require the same degree of intellectual grasp and of training in draughtsmanship which the execution of pictures and sculpture requires; but it does demand a special branch of training, for its own especial ends, which those do not demand. Decorative design does not consist in imitation of natural forms, but in the adaptation of these as suggestions for design, not to be copied as they stand in nature, but to be created anew as decorative treatment. Now, the study of the figure alone, and even the possession of the power of imitative drawing and colouring of all objects, however complicated and delicate, as they are seen by the outward eye, will not give of itself the power of assimilating and modifying these forms for use as decoration, nor even the right understanding of what that use should be. That it will not do so is evident from the fact, of which we see frequent instances, that painters and sculptors of very high power constantly fall short when they attempt decorative design, and produce work in this latter class which is feeble in execution and false in taste. A prominent example may be named in the case of what is in the main one of the finest and most powerful works of modern English art, the Wellington Monument. The figure-sculpture in this is exceptionally fine and powerful, and the general design of the monument grandiose and effective; but a good deal of decorative detail, such as the twisted knots of rope round part of the pedestal, and the medley of implements of war huddled together in other parts, represent an entirely false and, artistically speaking, a vulgar taste. And we should surmise, from

some of the expressed opinions of the eminent painter who is the responsible examining head of the Departmental art schools, that he himself attaches too little importance to the study of decorative design for its own sake.

If the reply is suggested that in the period of Renaissance art there were great paintings, and great decorative work done by the same men, our rejoinder would bring us just to the point we wish to come to. In the first place, we would say, as a matter of fact, that those who are generally considered the greatest of Renaissance artists, the great names of its latter period, were not the best of decorative designers. The architectural details produced by Michelangelo and Raffaelle, those of the former especially, are not their happiest efforts. The period of the finest decorative work was before their time. And the reason, in part at least, was that in the earlier days decorative art came first, and sculptors and painters ascended from that to the higher arts. They had mastered the decorative side of design in the first instance. When the human figure came to be the first object of interest with every artist, the decorative design was passed over more lightly as a secondary interest. As we trace out the treatment of decorative art in any class of work,—say in silversmiths' work,—from the earlier to the later days of the Renaissance, we find a constant increase in the use of the figure as a decorative adjunct, and a progressive development in the freedom and power of its treatment, accompanied by an almost equally marked retrogression in the taste and suitability of the minor details. Mere cleverness of execution increases; good taste and the sense of fitness (so important in decoration) become deficient. And we imagine this will be so whenever the attention is entirely concentrated on figure work, on imitative work whether of higher or lower class, to the exclusion of any systematic study of decorative design for its own sake.

It is in relation to this view that one of Mr. Crace's suggestions as to the causes of the deficiency he and those whom he represents are complaining of has especial point. He has observed that too much stress is laid, in the Departmental schools, on the study of still life; and the evidence of the annual exhibitions of students' work at South Kensington goes to confirm this. A great many prizes are offered for this class of work, and a great deal of time is obviously spent often over single drawings, in finishing them up to the point which will secure a prize. It is a good deal to the not always healthful influence of Mr. Ruskin's writing and teaching that we suspect this is to be traced. He has largely dwelt upon the importance of finished and precise manipulation in painting. Now, it may be freely admitted that no class of study tends so much to progress in manipulation, in regard to painting more especially, than the study of still life. The objects to be studied are stationary and little subject to change of form or tones, and the art of reproducing them in pigments can be carried out with more patient minuteness than in any other branch of imitative art; but it seems undeniable that while no study exercises manipulation more, none exercises thought and intellect so little, and the exercise is almost contrary to that required for decorative design. Its object is entirely realistic; the object of true design is never realistic, usually far from it; so that here the training on which so much stress is laid is directly adverse to what should be one of the main objects of artistic teaching for the many.

It is a question whether, even apart from this, there is not in the Government schools of art too much time spent in the manipulation of special drawings rather than on what would tend to develop the power of drawing generally. We have observed on this before in speaking of the prize-drawings when exhibited, and we have it confirmed in various reports in regard to the system of work in the art schools. We know that weeks or months are often spent by a student in stippling at a drawing of a head or a figure from a cast, in order to get a medal or a mention for it; and the same time is even spent on drawing from casts of much more uninteresting subjects,—reliefs in plaster of fruit and flowers, &c. Such drawings are not artistically, in any sense, an end in themselves; no one really cares for such a shaded drawing from the round for its own sake; the only ultimate value it has is for the student who gets a medal for it, and hangs it up in his or her home as a trophy, and the allowance it may obtain for the school. The object of making studies of this kind is to acquire the power of drawing and the knowledge of the structure of the objects drawn, and this may be acquired and exhibited far better by half a dozen or a dozen drawings, not so prettily finished, but showing the result of the study of the same object in different lights and aspects, than by one minutely stippled example, which may be produced at the cost of much less real observation and draughtsmanship than is often shown in less finished work. More especially is this the case when we regard the study of drawing as a preparation for decorative design. To a decorative designer the knowledge of the figure is essential, but not the power of representing it in highly-finished relief; that seldom or never comes into decoration. What is wanted is the power of drawing it in all positions when required as an accessory to the design, and to this, multiplicity of study is much more requisite than mere finish of one or two specimens. This points out the direction in which figure-study should be modified, as it appears to us, to be subservient for an education towards the art of design rather than the art of painting pictures; and that, after all, is what the majority of those who study in Government Art Schools can do most good with. There is room for a much more numerous body of art-workers in the decorative arts than in the production of works of painting and sculpture. The latter are the top and flower of art, but the demand for them is limited; whereas decoration, of more or less elaborate type, is wanted almost everywhere.

Prizes are, of course, given for decorative design, in the Government schools, but the results are not of the highest class. In architecture the designs sent in, and for which prizes are awarded, are generally very poor, sometimes absurdly so; the subject is evidently not understood, and does not receive sufficient encouragement to bring out any but very mediocre work.

Looking at the means to be adopted for rendering the Government schools of art more productive of the sort of power which is in request, and for which there is apparently at present such an inadequate supply, it appears to us that no better suggestion can be made than one of those which is made in Mr. Crace's letter before referred to, viz., that the higher grade prizes should be open only to those students who show proficiency in the application of art to decorative purposes. We do not say that the production of original painting and sculpture of the highest class is not a higher object still, but it is not the real business of the Government schools to produce these. Those who want to become artists of this type must go through a different training from any which the departmental schools can well supply, except as a mere initiative. As it is, the highest and most coveted prizes are given for studies of the figure from the life and from casts, and for still-life paintings. Let the mere manipulation be less encouraged by lowering the scale of prizes for it, and let the highest prizes be given for work which shows thought, not in mere imitation, but in the adaptation of natural objects, including the figure, to original decorative design, and to such design even apart from the adaptation of natural objects. The Government schools would then be in reality, what they are certainly not now, schools of *design*, not merely of drawing; and under such a system there would be the best chance that, after reasonable time, results would be shown in the turning out of a more trained, thoughtful, and original class of decorative designs. As an initial step, it is certainly also of importance that those who preside over departmental schools, in the provinces especially (where there is no South Kensington Museum), should be more proficient in decorative art than they, we imagine, often are. We have certainly ourselves known local teachers who were very well up in drawing and painting in one sense, very well able to direct and criticise the labours of a life class, and so on, but who were destitute of any notion of what constituted good or bad design in ornament; nor in South Kensington itself is there at all the right attention given to discriminating between what is good and bad in taste,—witness the over-laudation, on which we before commented, which has been bestowed on the work represented in the Jones Collection. Decorative design means thought applied to the choice and treatment of forms in their application to various materials and objects, and it is this side of artistic study which specially requires stimulating and directing.

"THE HISTORY OF FREEMASONRY."

THE design of the author of this work,* of which the first volume out of six is now published, is to embody in a single publication the "legendary" and the "authentic" histories of the Craft. The work by Herr Findel (of Leipsic), published in 1861, is considered to be the first history at all worthy of the name, of the Masonic Craft, which had been compiled; and in 1876 G. F. Fort published the "Early History and Antiquities of Masonry," discussing the legendary or traditional history of the fraternity. These two works Mr. Gould, and his friends associated with him in his laborious undertaking, have not considered wholly satisfactory, "dissenting very materially from these writers both as regards the facts they accept, and the inferences they have drawn." The actual "History" will be considered from the commencement of the Lodge records. In Scotland some minute-books of the lodges commence in 1599, while in England only the records of a single lodge (Alnwick) range between 1700 and 1717, the date of the formation of the first Grand Lodge.

That a correct "History" is required is evident from the following statement in a publication of authority:—"No man can give any account of the Order of Freemasony, of its origin, of its history, of its object, nor any explanation of its mysteries and symbols, which does not leave the mind in total uncertainty on all these points." Again, "There are so many various theories concerning the Origin of Masonry that each student may select his own favourite without prejudice to any other" (Mackenzie, "Royal Masonic Cyclopædia," p. viii.). The "sources," writes Mr. Gould, "to which the mysteries of Freemasonry have been ascribed by individual theorists," are very numerous. "Some of the more curious" are briefly described by him, and herein we are at once led to perceive the learning, and the great candour of the writer in his investigations; but as it is impossible now to follow him in all his details, the reader must perforce be referred to the work itself. He proceeds to summarise "what is actually known of certain systems or sects, in order that by a careful comparison with the authentic records of Mediæval Masons," it may be determined "how nearly or how remotely the usages and customs of the 'Ancient' and the 'Modern' Organisations correspond, and ascertain what grounds exist for attributing to the Masonic Institution any higher antiquity than is attested by its own documents; for however flattering to our pride may be the assumption of a long pedigree, it by no means follows that it will bear the test of a strict genealogical investigation." The consideration of these certain systems or sects, entitled, "The Ancient Mysteries, The Essenes, The Roman Collegia, and The Culdees," forms Chapter I., and is contained in over forty pages, but whether they do correspond or not must be left for a time, as our author makes a skip of some centuries, and lands us in England in the fifteenth century, or thereabouts. It is not usual in "histories" to work back, but it is in genealogical records. The son, from his father works back to his grandfather, and so on, picking up where he can connecting links from other pedigrees, until he reaches some pre-historic period in which so much is assumed. We could have wished that in this inquiry the history of Freemasonry had been first described from, as above stated, the formation of the Grand Lodge in 1717,—then its predecessors as far back as the few facts and traditions would help,—then the course during the Middle Ages of what is assumed to be Freemasonry, but would of course be Operative Masonry, and thence to these "Ancient Mysteries," if it be desirable to consider them as their predecessors. Is not the cart put before the horse in the volume under consideration? The heading of this First Chapter must here be sufficient for its own

* The History of Freemasonry: its Antiquities, Symbols, Constitutions, Customs, &c. Embracing an Investigation of the Records of the Organisations of the Fraternity in England, Scotland, Ireland, British Colonies, France, Germany, and the United States. Derived from Official Sources. By Robert Freke Gould, Barrister-at-Law, Past Senior Grand Deacon of England. Vol. i., 4to., 252 pp. London: Thos. C. Jack, 45, Ludgate-hill.

explanation; the forty pages comprise a very laborious investigation of the subjects, with ample quotations of authorities and references, ancient and modern, for the benefit of the captious. "According to Mackey" ("Encyclopædia," *s.v.* Talisman), "an instance of the transmutation of Gnostic talismans into Masonic symbols, by a gradual transmission through Alchemy, Rosicrucianism, and Mediæval architecture," is described. But what has Mediæval architecture to do with all these? Our author intends to treat his subjects fairly, but still occasionally he appears to us to be somewhat prejudiced. The moot point is ably discussed as to whether "English gilds are of English origin," or, as stated by Coote, "this trivial word (gild), due to the contributions upon which the (Roman) colleges had from all time subsisted, betrays their constitution; and we find them also where we ought to expect them,—in the Roman cities of Britain." It has been observed that "the colleges, the Collegium Fabrorum, which dwelt in the Civitates Regnorum, remained in this country throughout the imperial rule, and with the provincial inhabitants survived the Anglo-Saxon occupation of Britain,—that this is the true origin of the English guild it will not be very difficult to demonstrate" (Gould, "The Four Lodges," p. 38). "The truth is," writes Pike, "that the guild system existed before and after the Norman Conquest, but that there is no historical evidence of its beginning." The theory,—one of many,—connecting the Culdees with the Freemasons "advanced in 1844 by the Hon. Algernon Herbert, has been characterised by Dr. Reeves 'as a strange combination of originality and learning joined to wild theory and sweeping assertion.'"

We must pass on to Chapter II., comprising "The Old Charges of British Freemasons," first expressing our regret at the insertion of them in this first volume as being out of sequence in the "History," and also remarking that it is not shown that these "Old Charges" belonged to Freemasons other than of the operative class. This very interesting chapter may probably have been mainly contributed by Mr. W. J. Hughan, whose publication on the same subject appeared in 1872, but not then brought forward as a speciality for the first time, as in my two lectures read before the Royal Institute of British Architects as long since as 1860 and 1861, the one "On the Superintendents of English Buildings in the Middle Ages," and its continuation, "Collections for an Historical Account of Masons, their Customs, &c.," I had shown what was the connexion of these "Old Charges," in relation to the inquiry.* "The so-called Constitutions are peculiar to England and Scotland, and contain legends or traditional history, which are not to be found in the regulations or working statutes of the latter country, nor do they appear in the Ordinances of the Craft in either France or Germany. . . By no other craft in Great Britain," adds Mr. Gould, "has documentary evidence been furnished of its having claimed at any time a legendary or traditional history." This very important statement may occasion some controversy hereafter, but the extensive range of his reading has, no doubt, given Mr. Gould ample grounds for the conclusion at which he has arrived. The ten MS. copies of a Charge, quoted by me in 1860 have since been increased by diligent researches to more than double (*i.e.* thirty-one) that number. "No two of the manuscripts are exactly alike (except one duplicate) though there is a substantial agreement between them all, and evidently they had a common origin, just as they were designed to serve a common purpose." Each of the old Masonic or operative lodges probably had a copy amongst its effects; this was perhaps read to an apprentice on his introduction, so that possibly many others may yet be discovered. We must here take exception to the title these authors, Messrs. Hughan and Gould, have given to these charges, as belonging to Freemasons, leading their readers to suppose that they tend to prove that modern Freemasonry is the same thing as the old Operative masonry, to lodges of which craft these "charges" undoubtedly belonged, and are therefore more applicable to a yet unwritten "History of Architecture," or a "History of Building Trades," than to a history of a subject whose connexion with them has not yet been proved. We regret to have to point out that in describing the No. 29 Charge or "Papworth Manuscript," the author has omitted to state (though quoting "the motto") that at the commencement of the MS. is drawn the *coat of arms of the Masons' Company!* By a careful perusal of the interesting observations made upon each of the thirty-one Charges recovered, we find it stated that this coat of arms appears on only two of them, one being Charge No. 23, dating 1686, which has the royal arms with those of the City of London and of the Masons' Company, and the second being Charge No. 24, having the same two coats of arms. A few only of these Charges have been identified as belonging to a Lodge or Lodges in London, another perhaps to Chester, six to York, and one perhaps to Warrington, and so of some interest in connexion with Ashmole's installation as a "Freemason." Only two of these thirty-one Charges are ascribed to "late sixteenth century," the remainder (all but two) to the seventeenth. These two are of very high interest and are exceptional, and are two of those described by me in the lectures before referred to. One is considered to be of about the middle of the fourteenth century, and the other early in that of the fifteenth. These two originals speak of "Masonry" not "Freemasonry." No. 4 Charge, dating 1583, is the first in which the latter word is said to occur, and again occurs in another dated 1650. The No. 23 copy already referred to is signed as "written by Robert Padgett, Clearke to the Worshipful Society of the Free Masons of the City of London," to which is a footnote taken from Kenning's "Masonic Cyclopædia," p. 457, that "Robert Padgett, we are assured on competent anthority, did not belong to, nor is his name to be found in the books of, the Masons' Company." Several cases of this sort of unfortunate difference or contradiction could be named (as in No. 28). No. 25, dated 1693, has a word which it seems has raised a controversy, whether the passage *hee or shee that is to bee made a Mason* is not really *hee or they;* the grammar of the passage is so bad that either would do; but it also raises the other and important question of women being admitted Masons! In this particular Charge occurs "An entered apprentice's obligation to protect the interests of his master or dame," *i.e.*, mistress, clearly indicating that at that time, or in that Lodge, it was customary for females, in the capacity of employers, to execute mason-work. Hence it would seem to indicate that *this Lodge* was an operative as distinct from a Lodge of Freemasons, if any such existed at that date. Females could be, and are still, made Free of Guilds; they cannot be, I presume, of the Freemasons' fraternity. Besides these thirty-one manuscripts, there are found about twenty other late transcripts of the old Charges or printed copies, extracts, or references. The No. 8 Charge is in itself of great interest, being dated 1607, and possessing a drawn frontispiece of masons at work, with the words "Inigo Jones delin." at the bottom. A very remarkable assertion, printed in italics by the author, assures his readers that "All the Scottish versions of these Charges are evidently of English origin"; and in the second work by our author ("Four Lodges," p. 20) it is stated, "The practice existed in Scotland of individual brethren to make Masons out of Lodge."

After a style, or special proportion of design in building, had continued in fashion a few years, the builders (or masons) of the Middle Ages "gradually invented and adopted another, which was generally more ornamental than the former. It is, however, a very interesting and remarkable fact that nearly all the ecclesiastical edifices of this country, which are of contemporaneous ages, are of a corresponding or a very similar style. From Durham in the North, to Cornwall in the West, and in the intermediate counties, a coincidence of system will be found to be very generally if not always manifested. It is not easy to account for this uniformity in the architecture of churches at places remote from each other, by any other clue than by considering that each new style originated at, or emanated from some convocation or assembly of the monastic builders or Freemasons of each respective era." So wrote John Britton, in 1829 ("Gloucester Cathedral," p. 49). We most heartily trust that Mr. Gould's future researches will enable him to show in what manner the Master Mason and the Master Carpenter were taught, and in what town or towns the Head Guild or Guilds existed. The statute of 1360-61 (34 Edward III., cap. ix.) uses the words, "all alliances and covines of Masons, and Carpenters, and Congregations, Chapters, Ordinances, and Oaths betwixt them made, or to be made, shall be from henceforth void and wholly annulled"; and the famous statute of 1425 (3 Henry VI., c. i.), which declares that, "the yearly Congregations and Confederacies made by the Masons in their general Chapiters assembled," together with the "Constitutions" themselves, appear to prove that there must have been an annual assemblage of the Masons, either under a governing head or Grand Lodge, or under some chief of a district or locality. As we are still in complete ignorance as to the exact manner in which the transitions of style in Mediæval architecture were effected, architects as a profession must be grateful to Mr. Gould for the elaborate inquiry and the careful comparison he has made herein of these Charges preparatory, we trust, to the other discovery; not that they yet materially help the question, but a few references are useful.

"The ceaseless progress of the building art," writes Mr. Gould, commencing Chapter III., "The Steinmetzen of Germany," "throughout the strife and turmoil of the Middle Ages, is a remarkable phenomenon which at once arrests our attention and challenges our research. Prince and bishop, kaiser and free city, wage their eternal feuds; nations rise, fall, amalgamate, or dissolve. All Europe is in a ferment, and yet throughout the greater part of it the mason quietly and unceasingly plies his trade. . . . . By degrees the face of the land became dotted with those monuments of architectural skill, the very ruins of which testify to the cunning of the builders. And who were these builders?" The early monasteries, and even the castles, may have afforded the means of acquiring skill in the manipulation of building materials, and furnishing large numbers of artificers and experienced master-masons. We know that each cathedral possessed its own complete set of workmen, as masons, carvers, carpenters, plumbers, glaziers, and labourers, while the monarch had a similar set, forming part of his household (and he did not disdain occasionally to press workmen), headed by the supervisor, and later, by the surveyor, and the architect. This latter set continued down to about 1836, when this branch of the household was reformed into the office of Woods, Forests, and Land Revenue. In the towns arose the craft guilds, for mutual assistance. The above Constitutions or Charges afford ample evidence of the three degrees of Master Mason, Fellow-craft, and Apprentice, and of a general assembly to be held annually at one place or another, for the "correction of faults, errors, and trespasses." It is very remarkable, however, that no *evidence* has been yet obtained of any such meetings, not even at the traditional York. The mayor of the city or alderman of the town in which the assembly was held was to be "felaw and sociat" to the master of the assembly, "in helpe of h'y ayenst rebelles and upberying ye rygt of the reme." This would appear to do away with all *secrecy* in lodges; while "in no trade of the Middle Ages, not even among the *Steinmetzen* of Germany, is it possible to find the slightest trace of a sign, or of anything approaching thereto," are two remarkable conclusions at which our author has arrived in the work before us. In commenting on the copy of Charge No. 12, Harleian, 2,054 (1650, or later), he writes, "We have here the earliest known mention of words and signs." Was Randle Holme, jun. (the former owner of the manuscript), a Freemason of the modern order? Again, it is said, "Did he (the apprentice) receive no token by which he could prove himself a brother? In the very nature of things we might expect that he did,—a sign, a word, a grip,—but not the faintest traces of these exist. The statutes do not even enjoin secrecy, but merely that "he shall keep every point and article."

A few observations on the Foreign branch of this subject must suffice. The insertion of the Chapters III. and IV. is explained in the passage:—"It is somewhat remarkable that French Masonic writers have not been tempted to seek the origin of the institution in their own past history, and in the traditions and usages of their own land. German authors, from Fallou onwards, have seized upon every trifling circumstance, every chance coincidence, tending to show a German origin of Freemasonry, and when a link was wanting in the chain of evidence, have not scrupled either to forge one, even to the extent of inventing ceremonies, or to placidly accept, without inquiry, the audacious inventions of their predecessors." On

* These two papers were printed in our volumes at the time.

p. 202 is given "The Statutes, &c., of Montpellier," dated 1586, in which occurs "*maistres massons*"; and "the craft of *maçon architecte* was of the sworn (incorporated) trades of the city as it is of the other cities of the kingdom."

The code, or constitutions, or ordinances, of the *Steinmetzen* of Germany date only from 1459, Ratisbon; 1563, Strassburg; 1462, Torgau; meetings were held at Speyer, Strassburg, and Ratisbon; though Strassburg, Cologne, and Vienna, and later Bern, are also mentioned as the chief lodges. "The Brother Book of 1563" is given in a translation, with also "The Torgau Ordinances of 1462." The *fraternity* was quite a new departure;—the fraternity was agreed upon as something new; the *usages*, being ancient, were *confirmed*. The same division occurs, in these, as in the English Charges, of master, fellow, and apprentice. "We may therefore conclude," writes Mr. Gould, "that the chief lodge, the fraternity, and the ordinances, were all the direct result of the decline of the Craft, which decline may be attributable to the fact that the chief cathedrals were already finished, and that those in course of construction were being slowly prosecuted, and in some cases temporarily abandoned .... work was becoming scarce, ordinary masons were acquiring the technical skill of the *Steinmetzen*.... The masons were thrown upon civil employment.... their work became subordinate and supplementary to that of the ordinary builder .... the number of small masters would increase .... the highest class of workmen .... would develope into artist sculptors; thus the fraternity, being more and more subdivided and bereft of its most skilful members, gradually assumed a form closely resembling that of the other craft guilds,—the invention of printing, and the resulting increase of knowledge, enabling an architect to study elsewhere than in the lodge, all the materials are present for a practical dissolution of the fraternity, as we have learned to know it."

Here we will leave the consideration of this chapter III., and pass on to Chapter IV., "The Craft Guilds of France." We can but praise the carefully-selected historical account now presented. Several of the codes of the fraternity of the mason's trade,—as of Amiens, 1407, and Paris, 1260,—are given, the latter including many of the building trades. In two paragraphs near the end it is stated that the plasterers and masons are liable to the watch duty, but the mortarers and stonemasons are not liable. The reason assigned by the *prudhommes* to Boileau was that it had been traditional from father to son that they had been exempt ever since the time of Charles Martel (715-740). We thus see that as early as the thirteenth century a tradition was current in France that Charles Martel had conferred special favours upon the stonemasons, and that this tradition was sufficiently well established to ensure very valuable privileges to the craftsmen claiming under it. With but one exception, all the old Charges of British Freemasons (or Guild or Lodge Masons?) "pointedly allude to the same distinguished soldier as a great patron and protector of Masonry." Was this, then, an importation from France? Mr. Gould then offers some observations on this remarkable allusion, and in a paragraph in his following and last chapter, suggests that "Maître Jacques" of another French legend may be the "Naymus Grecus" mentioned in the English Constitutions to which attention has been already drawn, "as having been at the building of Solomon's Temple, whence he came into France, and taught the science of masonry to Charles Martel"; or "Naymus Grecus may be the 'M. Soubise,' his companion in Jerusalem, and which name may be a corruption of Sabazius, one of the many epithets applied to Bacchus. .... The Anglo-Saxon workman on first hearing the name might naturally ask for an explanation, and receive for reply that it was a Greek name. From 'Greek name' to 'Naymus Grecus' or 'Naymus the Grecian' is no great step." Not having studied the Anglo-Saxon language, I am not able to form an opinion on this play of words. Another celebrated personage in these French legends is "Hiram." "I have endeavoured to show," writes Mr. Gould, "its probable existence amongst the 'Companions' of France from a very remote period. Candour, however, demands the acknowledgment that in Freemasonry we meet with but sparing allusions to Hiram until the early part of the last (*i.e.*, eighteenth) century." But "Freemasonry,—according to the most zealous historians,—was only introduced into France in 1715," and the Hiram legend of the "Sons of Jacques" is asserted to be derived directly from Freemasonry. But also, 1726 is the more correct date of its introduction, and the legend far anterior, but still posterior to the "Sons of Solomon," — two bodies to be explained presently.

Chapter V., "The Companionage, or Les Compagnons du Tour de France," broadly stated, means the associations formed by the journeymen of France for mutual support and assistance during their travels. .... Bloody battles arose out of the enmity between the various corps. .... The survivors were condemned to the gallows! The "Sons of Solomon," the "Sons of Maître Jacques," and the "Sons of Maître Soubise"; these comprise nearly all the building trades. The Masons, not to be confounded with the Stonemasons, and some other trades, never belonged to the Companionage. The "Legend of Maître Jacques" is given, which in its way is, at least, as marvellous as that given in the English Charges. The ceremony of a "Companion" leaving his master after his apprenticeship is over, and on leaving the town in order to travel, and his return, are each pleasantly described. In 1726 the city of Lyon was contested between the rival stonemasons .... the "Sons of Jacques" lost the day, and retired from the town for one hundred years. .... They then deemed themselves entitled to return, when another battle was fought, resulting in their being again defeated, when they retired to the quarries at Tournus; the "Sons of Solomon," however, not being content, endeavoured to drive their competitors still further away. Another great battle was fought, but who were the victors is, unfortunately, not recorded by the French narrator Perdiguier. This in 1826! An amusing story of the contest in workmanship by the locksmiths of Marseilles is likewise told; and the great battle of 1730, when "the list of killed was very large, and it was with the utmost difficulty that the military were able to restore order." "No study of the *Campagnonnage* at all worthy of the name has yet been made; Perdiguier attempted nothing of the kind; he merely stated what was usual in his own time." We are, therefore, greatly indebted to Mr. Gould for the great learning he has exhibited in elucidating this new and interesting portion of the history,—whether it be called of the Building Trades or of Freemasonry. It is admirably worked out, and is very suggestive of his view that the "Sons of Solomon, Companions de Liberté, free companions, may be Freemasons .. the acknowledged principles of the two institutions .... rest upon a common foundation," and he gives forty-one coincidences as worthy of particular consideration in support of his views. These cannot here be considered in detail; should there be any reader sufficiently tempted, by what we have here quoted, to read the chapter, he will be further amused by the description of the history and working of "a set of ignorant present-day workmen, who were only known by means of public reports continually detailing their revolting battles, and of whose inner constitution absolutely nothing was known to the general public previously to 1841."

I would suggest to the author his reading the prefaces and texts in the two publications of the celebrated French architect, Philibert de l'Orme,—the one brought out in 1561, the other in 1567, which "pitch into" the French workmen of that period with very strong gusto. De l'Orme, "believing himself to be justified in assuming the title of architect, made no peace with the incapacity of workmen, the ineptitude of master masons and master carpenters, the tricks of clerks of the works, the dishonesty of surveyors, the fallacies of draughtsmen, or the presumption of carvers and sculptors, producing enmities" which caused him to be superseded by Primaticcio in the official post, which he had held for fifteen years, two days after the accession of Francis II., as noticed in the "Dictionary of Architecture," *s. v.* "Orme."

Have the building operatives of England been influenced in their practices by foreigners? I do not gather that this is touched upon in the chapters on the working men of France. The tradition of Charles Martel in the English Charges requires further consideration. I do not gather that our very diligent author has referred to the "importation" of a vast number of artists and workmen from Italy into Germany and France previously to and especially during the reign of François Premier, and even later; and he has yet to consider and prepare an equally careful chapter to those he has already given, on the peculiar practices of the masons of Spain, by a study of the works of Caen Bermudez, the chief authority for the valuable chapter on the working of the masons and of the architects in that country, given by the late Mr. George Edmund Street, R.A., in his work on "The Gothic Architecture of Spain." In Italy there was a celebrated set of builders as early as 643, as noticed in the Lombardic Code of Rothar, which refers to the "majestri Comacini" as the builders of that period. Mr. Gould has only a few words to say of the Lombard and Byzantine workmen:—"For those in the South of Germany means were at hand in Northern Italy to improve their art by communication with the artists there resident." Yes, and to imbibe their peculiarities. This school of builders of Como are stated to have emigrated for a period of a thousand years, which circumstance may have been the groundwork for the story (as promulgated by Sir Christopher Wren) of the "travelling bodies of masons, each being led by a *maestro*, and living in huts or cottages. I do not perceive that this story or class of workmen has been more than once, and then only incidentally referred to as a "theory," in the volume under our consideration. The interesting volumes of Vasari, on the "Lives of the Artists of Italy," do not appear to have been referred to, and they contain very much relating to the traditions and career of the "working men" of an early period, who probably influenced England, as it is known they did France, Germany, and Spain.

Again, no notice has been taken of the astonishing irruption of Dutch and German artists,—painters, architects, masons,—also of Italians, from Geneva, Florence, and other cities, not only in the time of Edward III. (1327—1377), but especially from the reign of Henry VI. (1422—1461), and later Henries, which may have greatly influenced the working of the British masons in practice and theory and tradition. Flemish art was greatly patronised in England. It is curious that even while discussing the Roman "Collegia," our author has not apparently referred to that ancient writer on architecture, whose work has come down to us, and was well known to many of the Mediæval builders, namely, Vitruvius, who, writing in the time of Cæsar Augustus, is likely to have known the secrets, if any, of Masonry. In the preface of the sixth chapter of his work, he declares that "the ancients entrusted their works to those architects only who were of good family and well brought up," and gives the reason.

Mr. Gould concludes this *first* volume by the observation, "Nothing can be more *indisputably evident* [the italics are ours] than the descent of English, and consequently of all, Freemasons from the Mediæval builders." This, I think, remains to be proved in the succeeding five volumes, which we sincerely hope Mr. Gould and his friends may soon publish. Among the previous extracts it is stated that Freemasonry was introduced from England into France in 1715 or 1726. "Why, when Freemasonry was introduced from England did no recognition take place of its previous existence in Germany? The reason is obvious. Stone-masonry, purely operative, *had* existed in Germany,—Freemasonry, that is *speculative* science, never!" Can we, on this conclusion to which Mr. Gould has arrived, infer that speculative Freemasonry, after all, is new, and was unknown to the British lodges before 1717? "Speculative masonry," writes Mr. Gould, in his equally interesting and laborious "History of the Four Lodges" (1879, p. 33, which work we here gladly notice in connexion with the more important one under review) "was, so to speak, only on its trial during the generation which succeeded the authors of the Revival. The institution of a society of free and accepted masons, on a cosmopolitan and unsectarian basis, was one thing; its consolidation, however, opposed as its practical working showed it to be, to the ancient customs and privileges of the operatives, was another and a very different affair." And he notices (p. 32) that "The summary erasures of lodges, ... the expulsion from the Masonic Union of original No. 4, and the high-handed supercession of original No. 3, amply attest that, in its career of innovation, the Grand Lodge was

in no degree restrained from the full exercise of its assumed powers, by any sentimental feeling of gratitude toward the lodges which had called it into being."

It is somewhat amusing to an outsider to read that, "During the pendency of the secession (for about ten years) the Lodge of Antiquity No. 1 (formerly the old Lodge of St. Paul, formerly held at the Goose and Gridiron in St. Paul's Churchyard) founded a separate Grand Lodge of its own. . . . . There being in consequence, at such time, four Grand Lodges of England in contemporaneous existence, viz.:—1. The Grand Lodge of England (Regular Grand Lodge), established 1717; 2. The Grand Lodge of All England, York Masons, 1725; 3. The Grand Lodge of England according to the Old Institutions ('Seceders'), 1753; and the Grand Lodge of England South of the Trent (Lodge of Antiquity, original No. 1), 1779" ("Four Lodges," p. 22). In addition to this novel circumstance, we are enlightened by the fact that, "The introduction into this country (partly by M. A. Ramsay in 1740) of the then newly-devised and so-styled 'High Degrees' was doubtless greatly aided by the foresight of their originators, who, whilst refraining from any direct rivalry with the Ancient Craft degree, at the same time cleverly associated their invention therewith, by limiting the privilege of membership to Freemasons. They thus instilled a belief that the alleged 'High Grades' were a recovered portion of the ancient mysteries of the fraternity. . . . . and instead of an innovation, but the raising of a more stately and perfect superstructure, on the foundations of the existing edifice of Masonry." Dr. Oliver speaks of forty degrees as then practised on the Continent, though he had a list of nearly 1,000. And, "The special object of the new ritual (Seceders) was the promotion of Royal Arch Masonry (introduced about 1736-44), and as many gentlemen preferred joining the Grand Lodge of 'Four Degrees' to associating with the society which worked but 'three,' the rival body was successful in its career of innovation. A clue being thus afforded to the reasons which prompted its formation, as well as to the causes of its extraordinary success." It appears that in 1766 the grand secretary of the Grand Lodge called the Royal Arch, "a society which we do not acknowledge, and which we regard as an invention designed for the purpose of introducing innovations amongst the brotherhood; and diverting them from the fundamental rules which our ancestors laid down for us." We must conclude these extracts by another:—"Masonry may, therefore, be termed the stock, and modern Freemasonry the scion; the pristine simplicity of our ancient English rite being now only reflected in the mirror of tradition" ("Four Lodges," p. 42).

This History thus passed under review will, no doubt, take its place as a standard book of reference and authority, superseding all others, a position which it deserves to have accorded to it, if only for the calmness with which it criticises the assertions, stated as facts, in so many of the writings of the brethren:—"It is impossible," writes Mr. Gould, "to restrain a feeling of impatience when writers whose works would be otherwise valuable destroy the confidence of a critical reader by such baseless assertions" (p. 147). Another reason for its taking a high position is the clear exposition, after long researches, into the various portions of the ancient systems or sects which it is assumed were the predecessors of Freemasonry. The last chapter, as we have already observed, is entirely new, and adds great interest to the inquiry, and to the volume, the careful perusal of which will repay all those who are interested in the subject of Freemasonry.

WYATT PAPWORTH.

A Popular Resort.—The shareholders of the Winter Garden Company at Weston-super-Mare are about to consider a proposal from a gentleman of experience in the far West to obtain the property and form therein a zoological collection. The gardens, at present, are in an incomplete state, as the directors do not care to expend more money than the amount subscribed in shares, but there can be little doubt that if the same was properly completed, and a large hall or pavilion erected on the site set apart for such building, the same would become a popular resort.

ANKLES AND WRISTS, FEET AND HANDS.

IT has been noticed of ankles and wrists, when these are compact and well formed, that the rest of the figure is usually of good shape also. In these parts the construction of bone on which the limbs are framed comes close to the surface and evinces by their character the quality of the rest of its structure, and on this subject a few remarks are offered.

It has been affirmed of the thoroughbred horse that he can stand under an equal weight with the stoutest of the breed usually employed by brewers, the superior compactness of the bones making up for their less width. In applying this remark to the human construction some reserve may be requisite, although all may notice the great variety which is observable in the look of blood and breed between not only races of men but individuals, even of the same classes. Regard to these peculiarities and differences in the human figure is especially in the province of the sculptor, inasmuch as it is by the element of form alone that he can present and express all that is his aim in his art.

"The biggest man in the smallest compass" is an expressive athletic phrase, and is well exemplified by many of the ancient works of sculpture, especially by the principal ones remaining of those which adorned the Parthenon. The ankles and wrists in these representations of the human form are very distinct and clearly displayed, but the ankles are not large. A wide wrist in a man is essential to strength as a support for the hand, especially in the act of wrenching round, but it need not be clumsy. In a woman, who is not supposed, for beauty, to require strength in the arms, it cannot be essential that the bones of the wrist should be wide, although it is assumed that it should be sufficiently large round to allow the hand to be drawn through a bracelet that fits it, but not too tightly. This, however, presupposes, not a diminutive hand, but that it is so pliable as to close round, like the petals of a flower or the roll of a leaf, in passing through a small circumference.

In respect to ankles, however, the two sexes are more in a class, for both desire to be agile, and there can be no grace without a reserve beyond the strength exerted, and women, as dancers, exercise as great feats of activity as men. In consequence in either case there can be no satisfactory appearance of erect attitude without well-formed and compact ankles on which the whole superstructure is supported and moves with swiftness and precision. The ankle accordingly is a part which requires much attention, and there is no portion of the frame perhaps, with the exception of the head and face and hands, in which a greater diversity is to be recognised. The inner ankle, which indicates the lower termination of the *tibia*, is somewhat higher and further forward than the outer ankle, which is the lower end of the *fibula*. These two bones form the bony support of the leg, from the knee to the foot, but the variety of configuration in which their terminations just above the latter are presented in nature and translated in art is very remarkable.

The two ankle-bones, as we have said, are not exactly opposite, but the degree in which this takes place has many phases. In some cases the outer ankle bone is much lower than the inner one, in some nearly opposite. In well-selected form, however, there is rarely a great difference. Then the degree to which each ankle-bone is marked is very variable. In some cases the one, sometimes the other, is most pronounced. In some forms the inner ankle seems nearly lost, and in others to be noticed as the more strongly marked of the two, and art follows nature in these variations. In Thorwaldsen's Venus the inner ankle is but slightly pronounced, while in the Venus de Medicis it is the more emphatic of the two. Canova, as usual, follows the antique example in this respect, and also in the considerable substance and width he gives to the ankles in his statues of Venus. The question presents itself, Is so much width requisite? The weight does not rest upon the outer parts of these prominences, but upon the more central underneath parts of their surfaces, where they are articulated on the bones of the foot. Of course, it could never be acceptable that the ankles should have any appearance of weakness, but on the other hand, a superabundance of bone there which is not requisite for strength only takes away from the appearance of fleetness and agility. How small are the feet and fetlocks of a deer, and even its hocks are not wide across, and yet what wonderful speed and endurance this tribe possesses; and here we naturally recur to what has been remarked of the bones of the dray-horse and racer, namely, that compactness of bone makes up for its less width. It is, no doubt, somewhat hazardous ground to venture on to suggest that some of our acknowledged Classic types of beauty among the antique statues have ankles somewhat thicker than is requisite, especially as in this respect they have been followed by many modern sculptors, although not by all. In regard to the practice in Rome, this subject is open to the following remark,—that the Roman woman is usually of stout proportions, especially when of the peasant class, who furnish most of the models to artists in that city. It is only, however, to a slight degree that we venture to differ from so much precedent; but this moderate variation may be submitted to add much to the taper grace of a leg, without taking from its strength. To speak generally of the female limbs, both upper and lower, when they are beautiful they may be described in comprehensive terms as not very widely departing from the tapering cylindrical form, varied, however, all over with contours of great diversity, carefully to be studied from nature with discrimination of selection. Thus unnecessarily wide ankles or wrists take away from this taper form, and thereby impair its delicacy and grace without affording greater strength; for when these parts are wider than is requisite, it rather leads to the view that the bone is not of the most compact and high-bred quality.

It is evident that this mode of reasoning and treatment must not be carried too far as no result can be more unfortunate and more removed, not only from grand and noble, but even from truly graceful, form, than that the ankles and wrists should look insufficient. It should stop short at that degree of fineness that may give a look of delicacy to the wrists in female form and of activity in the ankles. In the latter it is essential also that they should be very clean cut and distinctly marked, so as to show that their actual size is not the result of fat or thickness of skin, but that of the bone itself covered but with a thin skin. With persons not in health, or inactive, or aged, it is common for these parts not only to become enlarged but also puffed so that the ankle-bones are scarcely seen; and the filling up of the depressions between them and the tendon of the heel, instead of giving them real strength, rather argues the same degree of integument or fatness upon the prominences also of the ankle-bones, which virtually diminishes the size of the bones themselves. Thus, if the ankles are to possess that graceful fineness which favours the taper form of the legs, these parts around have to be kept rather clear of fat, which is a characteristic of youth, in contradistinction to that of puffiness which is a quality of age or want of condition. The above treatment in these parts is quite consistent with the utmost roundness in the limbs. It must not, however, be carried to leanness, but taste and selection of form have to regulate the distinctness that should be adopted.

The heel also, especially in female form, may be kept narrow, but it should not be too short, or a want of leverage for the hind muscles of the leg to act upon is the result. The *os calcis*, or bone of the heel into which the principal muscles for extending the foot downwards are inserted, is not in itself a wide bone, and the chief width of the heel, as generally seen, consists in that of the padding beneath it on which it rests, and is raised from the ground; but the making this unduly wide adds nothing to the real strength of the foot, and only renders it heavy and clumsy. At the same time a too great length of heel is especially ugly, as not unfrequently seen in the negro race, and, moreover, by its too long leverage renders some actions of the foot slow.

Also, there is no real strength in an undue thickness of the fingers and toes, of which the bones themselves are small, and the tendons which move them do not add much to their size, the rest of their dimensions being made up with fat and integument and outside skin, which padding and protection are requisite up to a certain point, but beyond which are superfluous and conducive neither to strength nor grace.

Finger-nails also should be of sufficient length, and their sides more parallel than they are usually made, and not like little toe-nails, as they are shown in art in some well-known instances. Finger-nails and toe-nails are as distinct in their character as the hands and feet are to which they belong,—a consideration often not sufficiently regarded. In speaking of the length of the finger-nail, it is the part which is closely attached to the finger-end that is alluded to, and not to that portion which may have grown beyond its tip. In portraits by Vandyke, probably from the fashion of the time, the finger-nails often project far beyond the ends of the fingers, of which, with due deference, the real grace may be doubted. If permissible in a picture, this certainly is not in a statue. Indeed, in such case in Nature, the nail ceases to be a protection, and becomes an element of possible discomfort, as liable to fracture.

The argument has followed more closely the female form than the male, but it applies to both, with the consideration to be observed that in the male figure a still greater distinctness of the form of the ankle and wrist bones is characteristic and appropriate. With respect to the wrist also, as indicated above, width is essential to give that power of various kinds and movements which the male arm requires, and without which no size or strength of hand or fingers would avail much. Men strong in the arm are wide in the wrist, and, indeed, this peculiarity is a far surer indication of real strength than the size of the muscles of the arms, as of the *biceps* of the upper arm, on which so much stress is apt to be laid, and than which no sign is more fallacious.

Remarks such as the above can only be usefu to the student when notice of them is accompanied by a careful consulting of nature and of the best examples of the antique; and there is no doubt, in preparing a model for a statue in marble to be pointed from, it is far better to keep these important bones of the ankle and wrist rather full in all respects than to reduce them to the last degree of fineness which is best done in the marble itself when the work approaches completion, as we know that in that material nothing can be added.

The palm of the hand and the instep of the foot have much in common, in its being essential that they should possess strength and freedom of action combined with compactness, and that they should grow gracefully and firmly out of the wrist and ankle. In the beauty, and to prevent [illegible] the foot down, and to give elasticity to the carriage that it should be arched, this arch resting on the pad of the heel and of the balls of the front foot just before the toes begin, and on which arch, formed by a number of bones closely united, and yet with some play, the whole superincumbent weight of the body and limbs is taken. The palm of the hand also should be pliable, and capable of taking a rounded and closed form as well as being flat.

In respect to the fingers which, with the thumb, may be called a united family of five, there is much to interest the artist and the æsthete. Next to the features of the face the hand is the part of the human body which is capable of most expression, and is more than any the direct material agent of the mind. The tongue says most, and the hand and fingers do the most. The thumb may be characterised as the sturdy boy of the family, who, with his nearest ally, his sister, the forefinger, transact most of the business of the establishment. Next may be said to come the two younger sisters, the middle one being the tallest of the family, and the next deeply attached to her, insomuch that in all movements of the hand they have a manifest tendency to keep together. Next and last comes the smallest of the family, boy or girl, which is somewhat independent in its action, occasionally, indeed, standing quite aloof, and having, indeed, an independent *extensor* muscle all to itself. This idea, although fanciful, points to the comparative intelligence and variety of action which the wonderful human hand, with all its array of fingers, possesses. The hand of the ape is comparatively a fore-foot. The fingers have not the same individuality, and mostly act as a paw, thus grasping the branch of a tree, not by opposing the thumb to the other fingers, as with the human hand, but using all together. This varies, however, in degree in the different tribes, but the characteristic is seen strongly in the gorilla class, where the thumb is very short.

On the other side, in the human form much of the chief employment of the hand depends on the use of the thumb as antagonistic to the fingers, as in grasping a staff or a sword, or a pencil or a pen. In consequence of the thumb alone being thus opposed frequently to the whole of the rest of the fingers, it is not suitable or convenient that it should be in any degree too short or slender in a delicate hand, as that would detract much from its use. It seems, indeed, by no means, even for grace, requisite that it should be so, for beauty and utility are closely associated, and it is only desirable that it should be fine at the tip, which does not take away from its strength. The little finger, however, may be small, as it adds but little to the strength of the hand, and is chiefly useful as an accessory, as in the steadying of the hand in writing and drawing. It is, however, especially useful to the instrumental musician, so that in that case it should not be small. Indeed, it may become more developed by exercise. The middle finger, being the longest, adds much to the grace of the hand, and the fore and fourth fingers, which are on each side of it, may appropriately be made of a similar length to each other, although this varies much in nature, in which, sometimes the one, sometimes the other, is the longer of the two.

With the foot again some illustration may be gained by regarding that of the ape. This tribe have been called *quadrumani*, or four-handed, as the foot in them as well as the hand grasps, which is essential in their arboreal habits. The great variety of actions of the human hand is almost as peculiar to man as his intellect, and the foot is chiefly a support in an upright attitude, and the toes act together and do not grasp. The hind foot of the gorilla has the great toe similar to the human thumb, set on antagonistically to the other toes, and widely apart from them, and he is even said to prefer to use the hind rather than the fore foot in grasping. The mode of the ancients in seeking beauty seems to have been in some degree guided by divergence from the lower types, and yet in some of the most cherished antiques of the Greeks and Romans, we find a larger space between the great toe and the next to it than is seen in Nature now. How is this to be accounted for? We venture to suggest, as they were both sandalled nations, and as the strap or thong to keep the sole of the sandal up close to the foot passed between these toes and was fastened in a loop above, that thereby these were somewhat unduly pressed apart, which from usage however, came to be viewed as a quality of nature. A greater division between these toes than between the others is assuredly pleasing, but if carried to an extreme this may be doubtful. It affords no additional strength, and gives an unnecessarily splay form to the foot, and the right foot especially of the Venus de Medicis may be cited as an instance of this, in which if the great toe were somewhat straighter and less separated from the next one, where the sandal strap would pass between them, it might be more graceful and compact without losing anything in strength.

In saying, however, that the foot is a support, and that the toes thus act all together in conjunction, it is not meant to convey that it is incapable of expression; indeed, it may be alleged on the other hand that this quality in the foot has been somewhat overlooked, and that in statues generally there is a sort of regulation way of disposing the toes without regard to expression, whereas we may test at once in ourselves, by baring the foot and placing it on the ground, and simulating to ourselves the effect of anxiety or hesitation, &c., that the foot is thereby contracted, and the toes pressed together into a compact form. This is not the only instance of their change of form and disposition under the emotions of the mind, but it may be sufficient to draw the attention of the student to the fact that although far inferior to the hand in that respect, the foot also may be an element of expression, which redeems it from its monotony, and may be considered especially worthy of notice by the sculptor, as the feet of statues are on their pedestals raised from the ground, and are often so much regarded. The great toe is always the stoutest and strongest, but in the best forms, in nature as well as in art, is not the longest, the end of the second toe being slightly in advance of that of the first, or great toe, thereby giving a more rounded and complete and graceful outline to the disposition of the toes, and of the front of the foot. It is also pleasing that the second toe should be markedly larger than the third, and the third, although in less degree, larger than the fourth. In respect to the little toe a comment may be made similar to that with regard to the little finger, namely, that as it is so much less practically useful than the others, it may be diminished in size without lessening the strength of the foot, but thereby much enhancing its beauty.

Hands and feet, indeed, should have respectively a consistent character, and when the little finger is small the little toe will appropriately be in harmony in regard to size. Nothing, indeed, can well be more useless as well as ugly than the little toe being large. It is ugly in itself, and even in a shoe enlarges the size of the foot without any gain in strength. A foot assuredly should be rather small than large, that is to say, it should be compact. It is quite possible for it to be too short as well as too long, for it should be in proportion with the figure. This will be given in reference to the upper members if it approach closely in length that of the lower arm from the wrist bone to the elbow, a very useful measurement in sculpture, most suitable both for beauty and for grace of movement. With the view of affording another useful measurement, namely, for keeping the hands and feet in an agreeable proportion, to each other we append one of which we have not seen previous mention, viz., that the length of the open hand from the point of the middle finger to where the palm joins the wrist, may well be made to coincide with that of the whole length of the top of the foot from the tip of the longest or second toe over the instep to where it joins the leg. The agreement of these two measurements will tend to keep the scale of the upper and lower extremities in accordance, but, of course, like other cognate proportions, is not absolute, but subject to some degree of modification in harmony with the character of the subject. In the case of a Hercules, for instance, the hand would appropriately be somewhat larger in proportion to the foot than in a delicate female figure. The expression that a man is "a man of his hands," as applied in an athletic sense, indicates not only skill in exercise or combat, but a powerful arm, wrist, and hand to back it, and in these cases, therefore, the hand and wrist are appropriately larger so as to give grasp and power. On the other side, the delicate hand of woman is even more efficient and deft at its suitable occupations when small and fine, but her foot must not be too diminutive or she will lack easy grace in those exercises which are suitably common to both sexes, such as walking and dancing.

It has been already commented on that the instep should be arched, so as not only to give beauty to its form and outline, but elasticity to the carriage. No foot is more inelegant, and at the same time more readily wearied, than a flat foot. The arch, especially of a beautiful female foot, is such that, if placed lightly on the floor, daylight is to be seen beneath its centre between the ball of the foot and the heel. A somewhat similar grace and roundness is to be remarked in a beautiful female hand and wrist. In the restored hands and wrists of the Venus de Medicis this has, perhaps, been carried to an extreme, and a degree of sweep of line adopted not borne out by Nature. The no doubt enthusiastic restorer of these, inspired by emulation of the graces of the rest of the figure, overstepped the authority of Nature in his treatment of the wrist and arm, in curving the lines too much to keep within the boundaries of truth. And if the original arms and hands could be found, they would doubtless rebuke this pardonable extravagance. As it is, however, notwithstanding those now present on the figure are known to be restorations, yet as possessing the authority of acceptance from having been so long conjoined to the original torso, head, and lower limbs in the statue as it stands in the Tribune at Florence, their influence is much seen in the works of students of the antique. Still, this delusion points to a true grace, inasmuch as the angle made by the bend of the wrist inwards, as in both the hands of the Venus de Medicis, should never be treated in such a method as to appear sharp and abrupt, but means are attainable for this without falsifying the bones. The study of grace combined with the truth of Nature is one of the most interesting fields of investigation and realisation by the artist; and in this, sculpture, although thereby its task is made more arduous,

has peculiar advantages, inasmuch as any departure from real truth which in one view may escape detection, will cause manifest deformity in another, which will rebuke the innovation and cause a rectification to be made, and the art to resume its due and proper course. It is thus that statuary has come to be especially accepted as the registry of excellent form, to a degree which painting, whatever her other advantages may be in some respects over her sister art, can never attain to. Thus it is evident that those examples of measurement to which attention has been directed above are much more readily illustrated in sculpture than in painting, although they are both in their several methods the handmaids of truth.

In ankles and feet painting has not such distinct and defined precedents to exhibit, but in respect to wrists and hands the portraiture of the Renaissance and of modern art of the last few centuries and of the present day affords many beautiful instances, and as they are second only to the expression of the features of the face they attract readily great attention. The costume of this period does not show the feet bare as the hands are, or they also would be noticed to have their expression as well as their more highly placed relatives; although, of course, not to the same degree. Where, however, they are exposed, as is usually the case in poetic sculpture, their expression as well as their form may well repay consideration. The most delicate feet of the present day are to be found, it is said, in the Zenanas of the East, where the feet of the occupants are seldom used in walking, and are never compressed by tight shoes, dainty slippers being usually their only covering. It does not, however, follow that their quality of form would be suitable to the highest class of sculpture; for without the development of exercise it is possible that they may be pretty without being beautiful.

EXHIBITION OF THE ROYAL SCOTTISH ACADEMY.

THE fifty-seventh exhibition of the Scottish Academy was opened to the public on Saturday, the 17th February, when the rooms were crowded to excess, curiosity having been excited by the rumour that the works exhibited were more than usually attractive. This is, no doubt, the case, and although, as usual, some of the most remarkable works hail from the south of the Tweed, it is satisfactory to observe that the exhibition affords evidence that the distinctive characteristics of the Scottish school continue to manifest themselves, and that there is an obvious effort at the attainment of a high ideal rather than the mere realisation of the commonplace.

Conspicuous alike by its size, position, and subject is Sir Frederick Leighton's well-known "Phryne at Eleusis." Remarkably beautiful for a rich and harmonious scheme of colour is L. Alma Tadema's portrait of his daughter, and if less remarkable in this respect, not less beautiful in its simplicity is J. E. Millais's "Caller Herrin'," albeit the dainty maiden sitting beside the basket of fish has none of the characteristics of a veritable vendor of fish. Opposite this work of Millais's hangs a graphic and impressive scene from "Eugene Aram," by J. Pettie, and near at hand is the "Farmer's Daughter," of W. Q. Orchardson, delightful in its freshness. T. Faed's "I cannot, Mother, I cannot," tells its own tale, but the same cannot be said of John Faed's "Poet's Dream." The poet may be Milton, or perhaps Bunyan, and the dream is but too palpable. Very charming is J. C. Hook's "Tanning Nets," and J. W. Oake's rendering of a bleak "March Morning," is admirable.

Of the resident artists the one who has come most prominently to the front is a sculptor, Mr. Clark Stanton. Mr. Stanton, besides being a sculptor, is no mean proficient with the brush, both in water and oil colour, and he is besides extensively employed in modelling works for the silversmiths. Possessed of this versatility, he has hitherto dissipated his energies, but seems at last to have determined to tackle a work of importance in his special line, and he may be congratulated as having achieved a marked success. The "Pandora" will, we think, bear favourable comparison with any work of the kind hitherto produced in Scotland. She is represented as seated on a low chair; the limbs, stretched out and crossed at the ankles, are enveloped in light drapery, the upper portion of the figure being nude. The contours are fully developed and finely modelled, but chaste and refined withal, and the position is graceful and unaffected. Upon her right thigh rests the unopened casket, the right hand lingering near it as if in hesitation; the left arm hangs listlessly over the arm of the chair, whilst the head is turned slightly to the left, the face being lighted up by a fitful smile. From whatever point of view the figure is looked at, the lines blend harmoniously. The pedestal is decorated with appropriate bas-reliefs. Mr. Clark Stanton is an Associate, and may have aimed at securing the vacant seat in the Academy, but this has been awarded to Mr. W. D. Mackay, whose charming pastorals, in which figures and landscape combine, never stale the appetite. This appointment does not appear to have met with the approbation of Mr. Rowand Anderson, architect, who, in consequence of it, has returned his diploma as an Associate to the Academy.

Mr. G. Reid represents on a large canvas the "Last Sleep of Savonarola" in an impressive manner. There can be little doubt as to the ability displayed by the artist in the treatment of the subject, but the picture seems a more fitting adjunct to the cell of an ascetic than the room or gallery of a modern lover of art, for the daily contemplation of it could hardly fail in producing a depressing effect.

Very dramatic is R. Herdman's "St. Columba Rescuing a Captive," a woman who has been bound to a rock, and apparently intended to be offered up as a sacrifice by a group of Ancient Caledonians, who are certainly depicted as savage enough. The artist has succeeded in imparting to the saint an air of fearless dignity, which impresses the savage nature with wonder and awe; the attendant monks (one bearing a high wooden crucifix) bear their respective parts in a characteristic manner.

Mr. Lockhart returns for a theme to the pages of "Gil Blas," and has never been more successful than in his rendering of the scene where the hero narrates his adventures to the Licentiate Ledello. The uncontrollable mirth of the gouty old Churchman, and the anxiety of his housekeeper as to its effect upon her master, are happily hit off. The execution is in Mr. Lockhart's usual broad and effective manner and brilliance of colour, the yellow satin in the young adventurer's costume forming the keynote. W. Mactaggart more than maintains his ground in the rendering of effect in sky and sea. There is the same uncertainty in regard to drawing as hitherto, but the canvasses have less of that rough painty look which used to be so unpleasant. His "Lobster Fishers" suggests the steady strong breeze and scudding movement of the water much more effectively than if there had been an endeavour to give more definite form to the waves, and while a boat is pitching and tossing the eye cannot take accurate account of details in the costume, &c., of the occupants.

If W. B. Hole has not achieved a great success in his rendering of the fourth scene of the second act of "Henry IV.," he has at all events steered clear from caricature, and produced a picture worthy of admiration, although it may not excite enthusiasm. *Falstaff*, *Prince Henry*, and *Poins* are each fairly represented, and their respective characters accurately discriminated. The drawing is careful, the composition excellent, and the colouring pure and effective. The influence of Orchardson may be discerned in the manner of treatment. But Mr. Hole has never been content to confine himself to one class of subjects, although these have been hitherto of an historical or narrative description. He now appears as a landscape and figure painter, and the "Night Catch," representing fishermen landing herrings caught over night, will bear favourable comparison with any work in the rooms of a similar description. It is not only remarkable for the truthfulness and accuracy of the details, but for the effective rendering of the early glimmer of the rising sun over sea and rock.

It is with delight that we hail the return of Sir Noel Paton to the realms of Fairyland. He is in a more congenial atmosphere there than when engaged in the attempt to excite the sentimental susceptibilities of pious old ladies. His Scriptural subjects are too pretty to be profound; but a fairy is nothing if not pretty, and profundity would extinguish her; and very pretty is the spirit who is challenged by the mischievous *Puck*. She is a creation as harmless and fragile as a butterfly,—a thing of beauty, which has its use to those who have clearness of vision to appreciate and understand it.

We regret to see that Mr. Robert Gibb has thought proper to put aside that with which he is familiar, what he can test by observation and experience, and to attempt to define that which he can only guess at. Sea kings were probably very grand and brave fellows, but their bravery can only now be to us of the melodramatic sort, and cannot, in the nature of things, raise the same feelings as did the real heroes who stood in a "thin red line" on the heights of Alma. This "Sea King" we have here, what is he? A fine-looking, muscular fellow enough, with a vest of chain-armour, bare shapely arms, a martial-looking face, a well-trimmed luxuriant moustache, and shaven cheeks and chin. He is not the real Norseman, but a modern dragoon got up to represent such. And so, too, with the "Last Voyage." Who feels any sympathy with the voyagers who convey the Viking to his last resting-place? Were there no burials in the trenches at Balaklava or the sands at Tel-el-Kebir? The author of the "Thin Red Line" can do better things than what we have here.

Amongst the landscapes (pure and simple) one of the most noteworthy is David Farquharson's "Links of Forth." From a height overlooking a mass of russet foliage, the eye ranges over the vale of Forth, where the river winds "in and out and round about" in so remarkable a manner,—a scene that must have struck every trrveller who has passed Stirling on his way to the North. Another impressive scene, although of quite a different sort, is R. Macgregor's "Crossing the Holy Island Sands," where a number of figures are wending their way across the level expanse, half-veiled in mist. Mr. Macgregor adopts a different *rôle* in "A Critical Moment," where a stalwart reveller stands, pistol in hand, upon the snow-besprinkled ground ready to meet the companion with whom he has quarrelled.

Gloomy and impressive is the "Lochan Dhu" of John Smart, and J. Campbell Noble shows poetical feeling in the picture named "As through the Land at Eve we went."

LEAD POISONING.

THE HUDDERSFIELD WATER CASE.

THE case of Milnes *v.* The Mayor and Corporation of Huddersfield (52 *Law Journal* Reports, p. 65), which was recently decided by Mr. Justice Mathew, and is reported in this month's legal reports, has an interest for [illegible] It is a case which [illegible] affects the general [illegible], but cannot be passed by without notice by scientific men and by lawyers. The facts out of which the action arose were most simple. The plaintiff, Mr. Mills, resided in Huddersfield, and the Corporation were the body who supplied water to the town. The water to the plaintiff's house was conducted from the mains through a lead service-pipe, which was the material invariably used at Huddersfield for this purpose.

In the middle of the year 1881 Mr. Milnes was attacked by an illness, the cause of which seems for a long time to have been undiscovered by his medical adviser. He got worse instead of better, and the symptoms at length clearly showed that he was suffering from lead-poisoning. The water in the house was forthwith analysed, and the presence of lead was discovered in it, and ultimately it was admitted on all hands, and at the subsequent trial, that Mr. Milnes's condition was due to his use of the water which had become contaminated with lead absorbed from the service pipe. There were some other facts material to the case which must yet be mentioned. By section sixty-six of their private Act the Corporation were entitled to prescribe the material to be used for service-pipes, and by their by-laws it might either be lead or cast-iron. On the other hand it appears that by section forty-eight of the Waterworks Act, 1847, the consumer has the power of compelling the Corporation to supply him with water through a service-pipe made of a material not selected or approved by the Corporation. Again, the pipes when laid belonged to the consumer, and the cost of laying them was paid by the consumer. By section thirty-five of the Act of 1847 the Corporation were bound to have in their mains pure and wholesome water, but nothing was said about the water when it reached the consumer's premises. It was under these circumstances that Mr. Milnes brought an action

for damages against the Corporation, and we may say at once that Mr. Justice Matthew decided, and, if we may say so, rightly decided, that the Corporation were not liable for the injuries which Mr. Milnes had suffered. It appears to be a correct decision, because there seems to have been no breach of any duty on the part of the Corporation. The water in the mains was undoubtedly wholesome, the material of which the service-pipes were made was generally considered a proper material for such pipes; the consumer could if he desired have had other material, and the service-pipes did not belong to the company. Thus, when they turned the water into the consumers' pipes they turned in wholesome drinking-water. It is a matter of regret when a man suffers serious injuries, but it is not less a matter of regret if other persons, even a Corporation, have to pay damages when they have not done any thing improper or illegal. Therefore, as we have already said, it appears certain that a consumer, under such circumstances as we have mentioned, cannot make the body which supplies the water liable for damages.

But, on the other hand, it is clear that this case is one of much more than mere general or legal interest. It must make every one who receives water for his house through lead service-pipes doubtful if it is safe to drink it. "No clear explanation," said Mr. Justice Mathew, in the course of his judgment, "of the cause of the contamination of the water supplied to the plaintiff was given by the scientific witnesses called on either side. It was stated that soft water like that supplied to Huddersfield usually contained ingredients which seemed to form an insoluble coating to lead service-pipes, and prevented the absorption of lead. It was not explained why this protective process had not taken place in this particular case. There was evidence to show that some persons who were peculiarly susceptible of the poisonous property of lead, and that so small a quantity as one-fortieth of a grain of lead per gallon of water might be injurious." Then the judge further points out how scientific witnesses had stated that the amount of lead absorbed in water varied acccrding to its nature, and how they were unable to explain how the plaintiff's water had been so much contaminated, or how the plaintiff alone had been so seriously injured. But all this must make every one suspicious of lead pipes; for who can tell whether his constitution is or is not susceptible of lead poisoning until he has passed through the ordeal? Or, again, how is it possible to keep water always of a character as not to [illegible] lead? On the other hand, there is a danger lest too broad conclusions should be drawn from an apparently isolated case. Still, as the matter stands, it is obvious that lead service-pipes are open to much suspicion; and next, that water companies should have the question closely investigated by careful scientific observation. One thing, at any rate, is certain, after this case, that the public can have no confidence in water conveyed through lead service-pipes.

THE STORY OF THE ASHBURNHAM MSS.

THE extraordinary interest connected with the Ashburnham collection of MSS.,—which, it is to be hoped, will soon become the property of the nation,—is such as appeals not alone to the bibliophile, but to the artist. The extreme rarity of the specimens of the illuminator's art of the sixth, seventh, and eighth centuries, which render the collection so unique, has, now that the library is in the market, excited abroad a no less lively interest than has been manifested by the press at home. This interest has, however, been carried to the highest pitch in Paris by the startling disclosures concerning some (and those the rarest) of the Ashburnham MSS., made only a few days since before the French Academy of Inscriptions by the learned administrator of the Bibliothèque Nationale, M. Leopold Delisle.

On February 22nd last, M. Delisle read to his *confrères* of the Academy of Inscriptions a lengthy paper relating to the sad story of the manner in which some of the choicest treasures of the Ashburnham collection came into the possession of their present owner.* Some three years ago, it may be remembered, M. Delisle so successfully proved that the fragment of the antique MS. Pentateuch in the possession of Lord Ashburnham had been torn from the original volume in the Lyons library, that his lordship most generously restored to its old home the treasured MS. The same learned authority has now come forward with unassailable evidence to prove that many other of the choice MSS. of the library of Ashburnham Place entered that collection through the no less reputable means than the direct robberies committed by M. Libri,—whose trial for his culpability is a matter of history,—in the libraries of Lyons, Tours, Orleans, and Troyes. M. Libri, a distinguished bibliophile, Inspector-General of the Public Libraries, and a naturalised Frenchman holding (before his conviction) a position in France almost equal to our own Dibdin, sold to Lord Ashburnham's father, it may be remembered, some of the rarest of the MSS. in the collection, the purchase of which is now the object of so much discussion on the part of the Trustees of the British Museum. Of the MSS. which passed into Lord Ashburnham's library from the Libri collection, M. Delisle has now shown that no fewer than six were stolen from the Lyons library, four from that of Tours, two from Orleans, and one from Troyes. The proofs to support this startling statement cannot be set aside, for they are founded on a comparison of the types of handwriting, the nature of the vellum, the dimensions of the volumes, the ink used, the length of the lines, the character of the illustrations, and the gaps in the original volumes which the Ashburnham fragments exactly fill up, together with many other points which we are afraid only too conclusively afford evidence as to the truth of the fraudulent manner in which these rare and priceless relics of the early centuries of the Christian era, sold by an eminent but unscrupulous bibliophile to the father of Lord Ashburnham, were obtained.

We can well understand how M. Delisle, knowing the interest to the French cultivated public of the library, the destination of which is now hanging in the balance, felt little hesitation in occupying the attention of his brother Academicians by the singular disclosures his research has enabled him to make. As has been made known to the public (particularly by the brilliant article recently published in the *Times*), some of the choicest treasures of the Ashburnham Library passed into that collection from those of the French bibliophiles Libri and Barrois; while the MSS. themselves are works either executed in France, or composed, as M. Delisle remarked, of documents intimately connected with the history, literature, and art of France. M. Delisle, it would appear, has never had the good fortune to see the Ashburnham MSS.; the collection indeed, is one which, being somewhat rigorously guarded, is almost unknown except by reputation. It is chiefly by the various published catalogues and by the invaluable report on the collection made by Dr. Zangemeister to the Viennese Academy, that M. Delisle has established his means of comparison with the facts his researches have revealed. As far back as 1866, it would appear, M. Delisle satisfactorily proved that no fewer than sixty of the MSS. sold in 1849 by Barrois to Lord Ashburnham were the result of a series of robberies committed by Barrois from the Paris Bibliothèque Nationale, a fact fully acknowledged, indeed, by Lord Ashburnham himself.

As for the MSS. from the Libri collection, they, as M. Delisle shows, are of no less suspicious a source. He thereupon takes up what he calls the *pièces de résistance* of the collection, the very features which are specially mentioned as the choicest treasures, and foremost amongst which stand the seventh-century Pentateuch,—a volume of inestimable artistic value as representative of the art of this distant period. This Pentateuch M. Delisle shows, beyond the question of a doubt, to have originally belonged to the cathedral of Tours. By a quotation from a catalogue of 1706 the volume is mentioned as having been at that date in the collection. With the Revolution the precious MS. passed to the library of the town, where it was seen as late as 1840. Libri himself, indeed, notices the volume in the account of a visit made to Tours, and inserted in the *Journal des Savants*. When, however, in 1850 a detailed catalogue of the library was prepared, the MS. had disappeared. Now, in 1847 Libri sold to Lord Ashburnham a Pentateuch the excessive rarity of which the French bibliophile did not fail to expatiate upon. His statement that the paintings were executed by Romans, were far more numerous and were in a state of conservation far superior to those in the Virgil of the Vatican, is in no way exaggerated; his story of the MS. having come from the abbey of Grotta Ferrata has, however, since been shown by Dr. Zangemeister to have simply been one of the many tales vamped up by M. Libri to conceal the real source of many of his treasures. Lord Ashburnham, indeed, it would appear, loyally admitted to M. Delisle the suspicious circumstances connected with his possession of the relic. "Different manuscripts of the Libri collection" (his lordship wrote, June 16th, 1869), "contain what I have long suspected, and what you have shown to be, fraudulent attempts to hide the true origin of books which had been either lost or stolen."

The fragment of the Psalter which has been cited as one of the marvels of the Ashburnham collection is now shown to have an equally suspicious origin, and so with many others of which we have not time to speak. We can well understand the indignation with which M. Delisle comments in his paper, read before the Academy of Inscriptions, on the series of acts of Vandalism which have resulted in suppressing and disfiguring texts precious as literary and historical memorials.

* We are indebted to the report *in extenso* of M. Delisle's paper, printed in the *Temps* of Sunday, February 25th.

ARCHÆOLOGY IN YUCATAN.

MR. AYMÉ, the American Consul at Merida, has transmitted to his Government a report on Yucatan, and incidentally he mentions that scattered all over the two States of Yucatan and Campeche are found the ruins of large cities. These ruins were first brought prominently to the notice of the world by Mr. J. L. Stephens forty years ago. Since that time, with one or two exceptions, these ruins have remained unvisited, though two of these cities are now pretty well known to the world, viz., Uxmal and Chichen Itza. These ruins are described by Mr. Aymé as the grandest on the American continent, and he gives the following short account of them:—They consist of large buildings very solidly built of stone, elevated on one or more huge mounds or terraces, and covered usually with sculpture of a peculiar character, all in very high relief. Hieroglyphs are few. Exquisitely-worked statues are found from time to time, as, for example, the great statue found at Chichen Itza by Dr. Le Plongeon, now in the Museo Nacional in Mexico. Discussion is rife as to the age of these structures; on the one hand, great antiquity is claimed for them, while on the other it is asserted that they are not 1,000 years old. Be their age what it may, one fact seems certain,—they are the relics of a high civilisation which existed before the white man's arrival, and they are the grandest and most satisfactory relics of that civilisation. But these noble ruins are fast perishing, carrying into oblivion the histories of the peoples who built them. Mexico has not the means to prosecute research amongst them, and, adds Mr. Aymé, the Americans "leave the treasures of American archæology at our very doors and send our money and brains to swell the mighty army of searchers of Greek and Roman antiquities."

ELECTION OF A SURVEYOR FOR THE DIOCESE OF NORWICH.

Two of the surveyors for this diocese having resigned—Mr. E. L. Blackburne, F.S.A., from ill-health, and Mr. J. H. Brown for other reasons—the Bishop, Archdeacons, and Rural Deans met at Norwich on Saturday, the 24th of February, to elect one surveyor in their place. There were thirty-three candidates. Amongst them Mr. J. P. Seddon, Mr. E. W. Tarn, Mr. E. Boardman, Mr. J. B. Pearce, Mr. W. O. Milne, and Mr. J. Arthur Reeve. After several divisions, Mr. Reeve, of Great James-street, London, was duly elected. The surveyors for the Norwich diocese are now Mr. R. M. Phipson, F.S.A., and Mr. Reeve.

The Committee of the Bewick Club, recently instituted in Newcastle-on-Tyne, have unanimously elected Mr. D. Croat Thomson an honorary member. Mr. Thomson is the author of "The Life and Works of Thomas Bewick," and is the first honorary member of the club.

LECTURES IN ARCHITECTURE AT THE ROYAL ACADEMY.

COLOUR.

MR. GEORGE AITCHISON, A.R.A., lectured on "Colour" at the Royal Academy on Wednesday evening last, Sir Frederick Leighton, P.R.A., being in the chair. The lecturer commenced by observing that as it was impossible to embrace so vast a subject as "colour" in one lecture, even when its application to architecture alone was to be considered, he should confine his remarks in the present lecture to colour applied to the outsides of buildings, hoping to be able to treat of inside colour on some future occasion. Proceeding to show that man had a passionate love for colour, whether exhibited in Nature's works or in works of art, that he had directly employed the beautiful things of Nature to adorn his temples or dwellings, and that colour had almost always been used to enhance the beauty of buildings, the lecturer remarked that colour (if we included white with its gradations to black) was the only visual means by which things could be known, and if there were persons so unfortunate as to be totally colour-blind, they saw only the shades and shadows of things. By the general consent of mankind, the arrangement of certain colours in certain proportions caused delight; in fact, for the bulk of mankind, nature had made almost every phase of earth, air, fire, and water beautiful. When people went into the country for a holiday, it was mainly to feast their eyes on the beauty of colour. Why were the painters courted and the sculptors neglected, but because the former dealt in colour, that all knew and loved, and the latter in a white abstraction from "the human form divine"? People loved landscape painting because it preserved for their admiration such evanescent phases of Natnre's colour that struck them as most lovely or most harmonious. They loved figure-painting mainly because it gave them the exquisite and subtle tones of flesh, and its harmony with the colour of hair and eyes, with lovely and gorgeous robes, with armour, with sky, water, landscape, or architecture. Landscapes were always open-air effects, and in numberless instances figure subjects were so too. Titian was particularly fond of open-air effects, and some of his most gorgeous colouring combined flesh and robes, trees and water, architecture and sky. To name no other examples as illustrative of this, we had his "Bacchus and Ariadne" in London, and his "Virgin and Child" in the Louvre. If, then, superb pieces of colour could be culled from Nature and put on a canvas to enchant us, a building might be substituted for a canvas, and be made equally superb in colour. In the bas-relief of Scilius we saw the servant fixing up garlands on the house. Here, then, was a direct application of beautifully-coloured leaves, fruit, or flowers to adorn a building, and to this day wreaths and garlands were so used in Italy. Everybody had admired the labourers' white-washed cottage latticed with rose-trees, or a red-brick cottage trellised with white roses, the fire-thorn, or the purple jasmine of Japan, or with clematis, wistaria, or the passion-flower. Either cottage was beautifully ornamented when covered with the grape-vine full of bunches of green, purple, or black grapes, not to speak of those houses wholly green with ivy or glowing with the red leaves of the Virginia creeper. It was only during the last century, and at occasional epochs, that buildings had been left to the monotone of one material. The Persians, the Assyrians, the Egyptians, the Greeks, the Etrurians, the Chinese, the Japanese, the Mexicans, the Peruvians, the Arabs, Moors, and Turks, all enriched their buildings with colour, and the Gauls, the Germans, the Scandinavians, the Goths, Huns, and Vandals did the same; while all that group of nations whom we called the Mediævals made their buildings striking, at least, by the aid of colour. We naturally asked why colour had disappeared from the outside of modern buildings, for till quite lately we only allowed ourselves white-wash, green outside shutters, a red chimney-pot, and a gilded weathercock. Though in this country Puritanism might have something to answer for, in Italy Palladio had more, for he said that "white was more acceptable to the gods." Beyond these two factors, however, the lecturer believed the main reason to be that external architectural adornment was mostly of perishable materials, and in bad times was not renewed, so that many generations had grown up without ever seeing a coloured building, and any novelty shocked mankind's conservative instincts. He remembered the storm aroused by Owen Jones's colouring of the Exhibition Building of 1851. He had been to Egypt and seen colour on a grand scale there, and he had studied the colouring of the Moors. On the other hand, his critics knew no colouring but the detestable application of gold on white they had seen at Versailles, or perhaps some pale pea-green and gold in their own drawing-rooms. Viollet-le-Duc wrote:—

"The Romans under the Empire seem to have been the first people who erected monuments of white marble or stone without colour; as to their coats of stucco, these were coloured inside and out.

Decorative painting played an important part on the outside of buildings. The front of Notre Dame at Paris shows many traces of painting and gilding, not put upon the bare walls, but upon the mouldings, columns, sculptured ornament, and figures. The same observations can be made under the porch of the Cathedral of Amiens; and the ornaments placed in 1257 on the top of the transept gables of Notre Dame were gilt, with grounds of dull red and black. The colouring applied to the outside is much more vivid than that of the interior; there are bright red tones (vermilion glazed with brilliant red), crude green, orange, yellow-ochre, blacks, and pure whites,—rarely blues,—for outside, the brilliancy of direct light and shadow allowing a harshness of colouring which would not be supportable under the sifted and diffused light of the interior."

The lecturer observed that the late Mr. Burges and himself, in their travels together, found traces of colour on the porch of a church at Villeneuve l'Archevêque. Viollet-le-Duc, after giving further details of the external decoration of Notre Dame, went on to make the following reflection:—

"Why do we deprive ourselves of all these resources of art? Why does the Classic school pretend that coldness and monotony are the inseparable accompaniments of beauty, when the Greeks, whom they present to us as artists *par excellence*, always coloured their buildings inside and out, not timidly, but by the aid of colours of extreme brilliancy?"

Having described the way in which some of the buildings of Venice and other Italian cities are coloured externally with frescoes and other decorative work, the lecturer referred to examples of external polychromy applied to buildings shown in pictures by Giotto, Benozzo Gozzoli, Luca Signorelli, Pinturicchio, and other masters, and expressed the hope that his lecture would not merely afford his hearers innocent amusement for an hour, nor simply inform them on certain historical points of art, but would bear fruit by turning their attention to the adornment of England, and even of those widely-spread colonies and dependencies to which some of them would, he hoped, go, and so be able to practise in countries where the sun was ever glorious, and not mostly hidden in clouds or mist. In Persia, a country which he had not yet seen, he believed there was to be found the most magnificent exposition of extreme colour applied externally to buildings, and executed, too, in that splendid and imperishable material, enamelled earthenware. Mr. C. Purdon Clarke, who had resided in Persia, and secured for England the Persian architects' pattern-books, described the effect of the coloured architecture of Persia as being splendid, and satisfying to such a degree that he not only did not desire to see it altered, but could not see how the colour could be improved. The lecturer exhibited examples from M. Pascal Coste's work on "The Modern Monuments of Persia," showing the upper portions of two minarets and half the upper part of the entrance to the Mosque of Mesjid-i-Chah at Ispahan, built in the sixteenth century by Shah Abbas. Through the courtesy of Sir Philip Owen and Mr. Armstrong he was able to show a piece of magnificent tile-work from Ispahan. The attention of the audience was also drawn to some drawings of splendid tile-work from India, in which unusual harmonies were obtained with a rich brown and pale fawn colour on a magnificent deep blue ground. Splendid colour was, as a rule, only to be found in the East, or had been obtained from it. The lecturer strongly suspected that all the fine colour in Europe came directly or indirectly from the East. First it filtered through to Constantinople, skilled men being sent thence to execute works in different parts of Europe. The churches, mausoleums, and mosaics of Ravenna were, he believed, executed by architects and artists from Constantinople, and probably the mosaics of the churches in Rome, Sicily, and elsewhere. It was known that St. Mark's, Venice, and the mihrab of the Mosque of Cordova, were done by them. The Crusades enabled the Westerns to see something of the glories of the East, and the plunder familiarised those at home with Eastern colour and workmanship. Afterwards this impression was kept up by the traders who visited the East and trafficked in its goods with the Pisans, the Genoese, the Venetians, the Portuguese, and the Dutch. There was very little doubt that that very effective method of outward adornment, horizontal stripes in different colours, was brought from the East. The red and black stripes in the buildings of Cairo were to be seen repeated in the Cathedral at Genoa, and in buildings at Pisa, Florence, and Siena, though in Italy the bands were mostly of dark green Serpentine alternating with white marble. Having described the leading materials used in the exterior of St. Mark's and the Doge's Palace at Venice, the lecturer observed that in many Italian buildings happy effects were obtained by filling in the ground of carved ornament with mosaic of green, gold, red, black, or other colours. Perhaps the most striking example of modern external polychromy was a palace at Berlin. Its walls were faced with black and red compressed tiles in a diaper; the window dressings were in majolica; and the frieze was in coloured glass mosaic on a gold ground. At the time the lecturer saw it, some eight or nine years ago, it was not pleasant to reflect that the tiles were probably English, the majolica Minton's, and the mosaic from the English Company at Murano, and that no such complete attempt had been made in this country. In Paris, there was the Opera House, where polychromy of a very delicate and dignified character was obtained by means of marble, bronze, and gilding, with a very slight admixture of enamelled earthenware on the flanks. The lecturer borrowed the following words of M. Charles Garnier's dream of the future of Paris from M. Paul Sedille's address on monumental pottery,—

"The grounds of the cornices will shine with eternal colours; the piers will be enriched with sparkling panels; gilded friezes will run along the buildings: the monuments will be clothed with marbles and enamels; and the mosaics will make all love movement and colour."

M. Sedille himself, one of the apostles of colour, had already enriched parts of France with buildings wholly or partially coloured, and he was now engaged in converting what the Romans called an "island" in Paris into one huge building for the sale of drapery. Two sides of the building were already built. The upper parts of each of the towers flanking the façades, built of brilliant white stone, were panelled with glass mosaic on a gold ground, the whole looking most brilliant and satisfactory in the sunshine of Paris. The front of the Turkish baths by M. Parvillée, the author of "Architecture et Decoration Turques," was faced with enamelled tiles of Turkish patterns and colours. Architects in France were not wont to lavish praises on the works of English architects; therefore the following flattering remarks by M. Sedille might be quoted with all the more pleasure:—

"Certain new constructions in London are truly grand. The friezes ornamented with terra-cotta and enamelled, mosaics on a gold, ground become the decorations of *façades*. Certain halls and public establishments are completely covered with painted earthenware, developing decorative composition with true style."

We also, then, should celebrate the pioneers of colour in London, and endeavour to cull instruction from their works; and, even if they had in some respects failed, they were to be thanked for their daring in being the first to emancipate us from drab, and to open for us that path which would eventually lead to the covering of London with beautiful and imperishable colour. M. Hector Horreau put medallions of colour on a house in the Avenue-road. Mr. S. S. Teulon designed the building covering a fountain at the corner of Great George-street, Westminster,—a structure once brilliant with colour, but now nearly black. Sir Gilbert Scott designed the Albert Memorial in Hyde Park. The front of a bookseller's shop in Piccadilly, designed by Messrs. Ernest George & Peto, is enriched with figure-subjects in opaque glass. The front of St. James's Restaurant is enriched with mosaics on a gold ground. Sir Digby Wyatt designed a shop in Gracechurch-street of iron and encaustic tiles, now pulled down. Some of Messrs. Doulton's buildings at Lambeth are ornamented with glazed stoneware and

"jewels," and their name is set out on panels of enamelled ware enriched with a pattern in colours. A shop in Bond-street has a part of its front faced with encaustic tiles. A railway station in the Finchley-road is enriched with stoneware and "jewels," and its passages and platforms are lined with white and grey bricks in bands. And, lately, two warehouses had been built in the City,—one, in Knightrider-street, wholly of glazed bricks and iron, the piers being of greenish-white glazed bricks, with grey bands, and plinths of dark brown; the walls above white, with grey bands; the architraves of the windows, string-courses, and cornice in brown enamelled bricks with impressed patterns; joining the upper and lower windows are frames of grey glazed bricks with the edges moulded, and panelled with brown glazed bricks with impressed patterns. The architect of the other warehouse, in Little Moorfields, had not so frankly accepted the glazed ware. Yellow and red terra cotta, Victoria and Portland stone, and blue Staffordshire bricks, are used in conjunction with dark red glazed bricks and tiles, with large glazed ornaments of a rich brown, and with white and grey glazed bricks. Time alone could show how these different materials worked together. Even now the yellow terra-cotta cornice of the ground-floor was getting black. Both of these warehouses were rather prepossessing examples of polychromy in broad flat tints. There is a very successful piece of partial polychromy in Lisson-grove, a warehouse built of white bricks with terra-cotta pilasters, strings, and cornices, having a wide band of enamelled tiles round two fronts on the first floor. There is some successful glazed earthenware in white and yellow outside the South Kensington Museum; and a garden wall in Springfield-road, N.W., is wholly of brown and red glazed bricks, with the capping and gate piers of glazed stoneware. This example was cited rather as illustrating the capabilities of the material than as being wholly successful in point of colour. As regarded painted work there were two very notable examples,—a shop in Berners-street and a house by North Gate, Regent's Park. The pilasters of the former are red, ornamented in gold with gilt capitals, with coloured and ornamented panels between, with the heads of musicians on a gold ground in imitation of mosaic. The lecturer believed that this example was designed by Mr. Pearson and carried out by Messrs. Clayton & Bell. The other example was the house of Mr. Tadema, and had its front treated mainly in yellow and white, with yellow columns to the porch and a light-coloured Greek ornament on the dark blue background of its frieze. At the back, two blank arched spaces had been treated by white and red lines and small coloured forms on a black ground. These blank arches had small windows at the top, whose splays and heads had been left white, with ornament in the shape of coloured lines and "jewels." It could not but be regretted that from our wretched leasehold tenure so little good work was done in London, and that when it was done it was mostly in perishable materials. Had these houses been the proprietors' freehold, the work would probably have been executed in permanent materials. It was painful to think of these works perishing, not only from the loss of the skill and labour employed on them, but from the extinction of personal memorials of artists,—artists who had been pioneers in a right way. Mention was made of the purple-red houses to be seen on every side, and which looked as if dipped in that

> "Little brook whose crimson'd wave yet lifts
> My hair with horror,"

which Dante told of,—though, perhaps, as a protest against drab they were to be welcomed. The *sgraffito* work at South Kensington and elsewhere was mentioned, as well as an office in New Bridge-street, Blackfriars, built some years ago of different-coloured granites; but all rough-surfaced materials so soon became blackened when used externally for building in London that it was almost waste of skill to use them, and waste of time to describe them. The quesrion now is, How can we redeem our buildings from their hideous monotony, looking as they do, in misty weather or in twilight, like ghastly white or grey spectres? In England generally it was not very easy to get the permanent colour that was required, on account of the damp, for in the country all porous materials afforded foothold for moss and lichens, red roofs soon becoming green, yellow, or grey; and stone itself became draped with lichens. It was, however, in London and the large manufacturing towns that the greatest difficulty arose, as any partial colouring in glazed materials in combination with rough and porous ones soon got out of tone, the glazed work standing out from its blackened surfaces like the teeth of a grinning negro. Man's perverse ingenuity was shown in his using coal so that a large part of it was unburned. The air thus became filled with soot, which choked his lungs and skin, and covered his trees and buildings with a black pall. It was needless to speak of the damage done by the carbonic, sulphuric, and nitric acid with which the truly infernal atmosphere of London was charged. Cobbett called townsmen "wen-devils," and, therefore, they now had an atmosphere congenial to them. No marble used outside would stand this climate, as was proved by the Oriental jasper columns of the Grosvenor Gallery, or by the Breccia columns of a shop near Oxford-street, or by any marble slab let into the front of a building. Red and green porphyry and some of the granites were the only natural materials that would stand. Bronze stood pretty well, and glass-mosaic and glazed stoneware and earthenware were practically imperishable. The white tiles once so largely used outside would soon perish, the cause of this being (he was told by an expert) that they were of porcelain of fine porosity, readily taking up moisture, but not so readily parting with it as materials of coarser porosity, hence their great liability to be burst by frost. Brown, pink, and grey polished granites, even in conjunction with the porphyries and bronze, made but a sombre building, and were, too, imperial materials, that only a nation, a town, or a very wealthy man could afford to employ. Glass mosaic, too, was very costly; and in connexion with it it should be observed that a gold ground in a dark setting was too light and cold, and should be more copper-coloured. If the buildings in London and our large manufacturing towns were to be made clean, gay, and beautiful, we must, the lecturer thought, rely solely on enamelled brick. And what a field would thus be afforded for design in colour, in ornament, in landscape, and in figures! It would be a healthful material, for it would lighten our streets and keep them cleaner; and it would be cheap, for the tenants would only have to wash the fronts of their houses instead of painting them. Mr. Aitchison concluded by quoting an objection and its answer in the words of M. Sedille:—

"If an objection be raised that this ornamental glazed ware so widely spread may increase the number of bad examples, I answer that there are, too, good and bad books, yet no one is inclined to deny the utility of printing. It will belong to our brother architects to create good examples, or, at least, to choose them."

THE PANDORA THEATRE.

VISIT OF THE ARCHITECTURAL ASSOCIATION.

ON Saturday afternoon last a large number of the members of the Architectural Association visited the Pandora Theatre, Leicester-square, now in course of completion ready for opening at Easter. The visitors were received by Mr. Thos. Verity, the architect from whose plans and under whose superintendence the building erected a year or two ago on the site of Savile House for the exhibition of panorama is being converted into a theatre. The theatre will be one of the largest in London, seating about 3,000 persons in conformity with the regulations imposed by the Lord Chamberlain and the Metropolitan Board of Works. The greater portion of the oval interior used for the exhibition of panorama is utilised as the auditorium, a piece of the northern end of the oval being cut off to make way for the orchestra and stage. The oval roof of the panorama building, mainly constructed of iron, with a surmounting lantern, is retained, some of the principals at the northern end being shortened, and let into the upper part of the wall which is carried up over the proscenium opening. For the purpose of obtaining a spacious stage, some property at the back of the panorama building has been acquired. The front or southern portion of this building is retained, and from a large entrance vestibule a staircase on the left hand gives access to the arena stalls and the pit. Behind the pit and stalls, extending round the auditorium from the prompt to the o.p. side of the orchestra, is a promenade 150 ft. long by 12 ft. wide, giving access to staircases of entrance and exit. The total length of the auditorium is about 85 ft., by 87 ft. wide. The proscenium opening is 35 ft. wide between the brickwork, and 33 ft. high. The stage is about 60 ft. wide by 50 ft. in depth from back to front, and in the centre of the back of the stage is the green-room, 15 ft. by 20 ft., the area of which can be added to the stage when necessary by raising an iron shutter. On one side of the green-room is a staircase going up to the females' dressing-room block, and on the other side is a staircase leading to the men's dressing-rooms. There are in all about thirty dressing-rooms. Property-rooms and scene-docks are provided at the sides of the stage. Passing through the vestibule from the Leicester-square entrance, access is gained on the level to the first or private-box tier, in front of which will be rows of balcony stalls, projected some distance beyond the supporting columns running up through the tiers by means of concealed iron cantilever construction. At the back of the boxes on this tier is a continuous corridor, 8 ft. wide, giving access to the boxes. At the level of this corridor, and approached from it on the o.p. side, is a special exit corridor leading out to the street at the back of the theatre. This special exit corridor is also accessible by means of staircases from the pit and dress-circle tier. From the entrance vestibule rises the principal staircase, leading to the dress-circle tier and to the *foyer* above the vestibule. At the back of the dress-circle tier there is a continuous corridor, 15 ft. wide by about 150 ft. long. From this corridor access is obtained to the private boxes, and there are gangways at intervals leading into the dress-circle stalls. From the *foyer* a good view will be obtained of the stage. All the exit staircases are 5 ft. wide, with stone steps (no winders) enclosed between brick walls. The third or upper tier will form the gallery, with, possibly, a row or two of seats in front, to be styled the "amphitheatre stalls." This tier will be reached from Lisle-street, on the prompt side, and additional means of exit will be provided by the special large exit corridor already mentioned. Above the gallery entrance are some dressing-rooms, and a large room for the ballet. The grid-floor is 44 ft. above the level of the stage, and the flies are about 20 ft. high by 13 ft. wide. Beneath the stage there is a large well, 21 ft. by 40 ft., and about 8 ft. deep below level of floor under stage. This well, which is lined with concrete, is, of course, intended for use in connexion with the mechanism of scenic effects. Beneath the iron roof, which will be, as we have said, retained, a *velarium* will be suspended, as at the Royal Albert Hall. Internally, the finishings will be in fibrous plaster, executed by Messrs. George Jackson & Son, of Rathbone-place. The whole of the constructional ironwork in the three tiers and elsewhere has been carried out by Messrs. Dennett & Ingle, who have also done all the concrete work. The scagliola enrichments of grand staircase and other parts of the building will be executed by the well-known firm of Bellman & Ivey, of Wigmore-street. The balustrade to staircase is in this material, and has red Devonshire die, Genoa green capping, and brown Belgian base and plinth; the columns and pilasters are of red Devon, with lower portions boldly moulded in red Serpentine and circular black plinths. This work is likely to be very effective when finished, owing the adoption by the architect of simple forms in design and mouldings, and it promises to be one of the best pieces of work of its kind in London. Messrs. Merritt & Ashby are the general contractors, their foreman being Mr. Walter Mitchell. The clerk of works is Mr. James Dewey.

Birmingham Architectural Association. The sixth ordinary meeting of this association was held at Queen's College, on Tuesday evening last, the President, Mr. J. J. Bateman, occupying the chair. A discussion took place on the relative merits of the Gothic and Classic styles of architecture and their adaptability to modern requirements. The following members took part in the discussion:—Messrs. W. H. Kendrick, V. Scruton, Norman Gething, F. Simon, W. G. Mantel, and Franklin Cross (hon. secretary), a vote at the close being declared by a large majority in favour of the Gothic.

ART-REVIVAL IN RUSSIA.

THE great progress achieved by the Russians in developing their home industries has been prominently illustrated by the schools of industrial art, and the exhibitors who participated in the grand national exhibition held this winter at Moscow. The Russians have not relied only on the exorbitant dues levied on foreign importation for the encouragement of home industries, but have sought, by the influence of technical education, and the revival of art teaching, to raise the general standard and value of home products. In this respect, the archæological studies to which so many Russians have devoted themselves during the last twenty years have been of considerable service. When railways and modern civilisation were first introduced into Russia, a movement naturally arose which led to a servile imitation of Western art. Indeed, even before railways, and, perhaps, since the time when Peter the Great wandered so far afield, there has been at least among the upper classes of society a tendency to adapt Western ideas and to neglect what might be qualified as national inspirations. The archæologists, however, have disinterred the ancient Russian art, which lay dormant in the heart of the people, appealed to their natural instincts, and was the expression of Russian genius. Whatever its abstract merits may be, the Russian is more apt to produce good work when working in the manner most in harmony with the native taste of his race. This fundamental principle has now been fully acknowledged, and the result is the daily production of admirable art-work of the Russian school.

In Russia art finds its most popular expression in the goldsmith's work. On all possible occasions gifts of plate, jewelry, and gold ornamentation are made, and these commemorative presentations are a great incitement to the art-workers of this craft. Their section is the most remarkable at the Moscow exhibition, and, among the exhibitors whose names are best known, we might mention Messieurs Sazikof, Chliebnikof, and Ovtchinnikof. The latter, by his inventive and adaptive genius, has strikingly demonstrated how the native style is admirably suited to work in precious metals. M. Ovtchinnikof has contrived to modify to some extent the appearance of the enamels or precious stones intermixed with gold and silver, so dear to the Russian, but somewhat gaudy in their effect upon the eye of the Western critic, by introducing colouring of a more subdued or æsthetic character. He has further succeeded in reviving the Byzantine process of enamelling mouldings. Enamel imitates the flesh, while chased gold and silver constitute the limbs and bodies of a representation of Christ and the twelve apostles to be seen at the exhibition. From the Japanese, the same manufacturer has learned how to introduce designs, leaves, &c., of silver in the paste of an enamel, baking the two together.

The revival of national taste is noticeable not merely in this kind of work, but also in furniture, in the ornamentation of tissues, and in house decoration. Museums of all descriptions have been created in various parts of Russia; and, though much still remains to be done, there can be no doubt as to the thorough character of the present movement. It is also all the more powerful as it is in a very great measure due to private initiative. At Moscow, no less than 12,000*l.* was obtained by means of public subscription to establish a Museum of Art and Industry. This work was commenced in 1863, the museum was opened in 1868 under the direction of M. de Boutovsky, and it has continued to prosper and grow in wealth ever since. By the side of this museum we have also at Moscow the Strogonoff school, which was first organised in 1860. Here there are special classes to teach design, painting on cloth, printing on tissues, goldsmiths' and jewellers' and locksmiths' work, cabinet-making, and the ceramic art. Nor is this all; arrangements have been made to enable some of the pupils to work in factories during a part of the year, so that they may complete by practical experience their theoretical training.

The methods of teaching employed in Germany, France, and at South Kensington, have been carefully studied, and many points initiated. The policy inspiring these efforts is that of enabling Russia in every respect to provide for its own wants. The large tracts of land covered by the empire of the Czar, and their abundant yield of corn, render Russia independent of foreign countries for its food supply; and now it is seeking to attain the same degree of self-reliance with respect to all manufactured articles. The prospect is not a pleasing one for those who in England and elsewhere seek to trade with Russia. Their best opening so far has been due to the superior artistic merit of articles manufactured in the West; but now it will be seen the Russians are excelling in this respect also. According to many authorities, the Russian goldwork is considered superior to that of France or England; and the prohibitive duties imposed on foreign importations will compel many Russians to content themselves, in most other respects, with whatever degree of art home manufacturers may be able to display.

A PRACTICAL CO-OPERATIVE ASSOCIATION.

THERE are few of our readers, we suspect, who will not agree with the statement that it would be difficult to exactly determine the advantages which accrue from a strike. For one of these unhappy disagreements which may possibly have led to a slight improvement in the relations of master and men, how many result solely in loss to each? The strike of the Parisian cabinetmakers last year will doubtless be remembered by our readers. The importance and protracted character of the movement in a city of which the manufacture of furniture is one of the staple branches of industry, led to much suffering and inconvenience; and when, at length, a peace was patched up, it was found that the position,—the difficulties of which had caused the strike,—so far from having been improved, had only grown more desperate. As we remember pointing out in these pages, the great firms of the French capital, unable to obtain their goods from their own French sources, found no want of manufacturers abroad, especially in England and Belgium, only too ready to supply the Parisian markets. When the strike at home was at length terminated, the trade too late discovered that their old clients, having continued to be satisfied with the foreign goods supplied them during the strike, were in no way anxious to patronise their own countrymen. The position was, and still remains, an alarming one for the Faubourg St. Antoine, and a great many of the smaller firms have been unable to stand the strain.

Among certain of the workmen who went out on strike, the sense of the worthlessness of their triumphs has come home with sad force, as it is found what time has been lost, what debts were contracted, and how small, in fact, have been the results obtained in proportion to the efforts made. As usual among the men, previously to and during the strike, there were not wanting the active propagators of many most specious theories respecting that much-belaboured question of the relations of capital and labour. What matter if French industry were annihilated? asked these worthy cosmopolitans; a demand for labour in some other part of the world must be the only consequence! These apparently broad-minded ideas met with positive acceptance not alone among the men, but even in the very trades-committees.

The sufferers by the strike, however, had, as may be imagined, reasons not difficult to understand for wishing to see the differences brought to a rapid conclusion; they were little concerned with the solution of the serious political questions that certain of their number seemed more interested in studying than any other point. This more peaceable section of the men out on strike, unlike some of their brethren, were far from willing to sacrifice the interests of their country for the sake of a political doctrine, and from this group was formed at the close of the strike the co-operative association, the organisation and results of which we would wish to lay before our readers. During the strike the members of this association had particularly shown their activity and vigilance respecting the men's interests, but the strike concluded, they were the first to admit how far from satisfactory had been the settlement of the antagonism between the men and the masters.

The much-mooted question of emigration, it may be stated, received in Paris among the cabinetmakers a serious blow from the results of the report made by the delegation specially sent to the Philadelphia Exhibition with a view to inquiring into the condition and prospects of the trade in "the States." Hence it was determined that the wisest course was to remain at home. A meeting was held by the more active members of the group, the rough plan of a purely co-operative association was drawn up, the necessary capital, a very small sum (70,000 francs, 2,800*l.*) was borrowed, and in the face of the unsympathetic attitude of a large number of their brethren, the association was fairly launched.

The financial results of the first year of its existence, made known a few days since to the members, serves as an interesting proof of the success of the undertaking. The co-operative workshops,—in the Rue du Chemin-Vert, No. 106,—were opened on the 15th January, 1882, so that the results of a full year's work were made known to the assembled shareholders on the reading of the first annual balance-sheet, the net profits being declared, amidst much applause, at 6,707 francs 40 centimes (about 270*l.*). The sum, it will be seen, is small, but is none the less hard on 10 per cent. profit on the original capital of 2,800*l.*, a fair return for a first year's experience.

The success of the undertaking may largely be set down to the admirable organisation of the association. Our neighbours, we have long freely admitted, are gifted with "the genius of organisation," and, indeed, it is a merit allowed them in the management of their whole governmental and financial system, even by their bitterest enemies. The organisation, however, of this special association of which we are treating, may be said to offer some peculiarities in its strict system of discipline. Entire control of the whole association was immediately lodged by the members in a committee, which in its turn appointed its director, and the foreman of the shop. The authority of these two over the men is as complete as it would be in any ordinary workshop; but, let it be observed as a characteristic detail, it is an authority which, very different from the usual, is tacitly admitted, and fully recognised by the men, not a murmur being raised against their self-elected chief. The Association has been fortunate in possessing among its members a number of first-rate workmen, many having been themselves masters, but having willingly sold their business to join the association. 140 shares, of 500 francs each (20*l.*),—5 francs on allotment, and 5 francs paid each month,—were subscribed by the members, no one being allowed by the statutes to hold more than one share.

The early months of the association were, as may be imagined, far from successful; it is the inevitable fate of most serious undertakings to meet with considerable difficulties at their outset: only ten men being employed in the shops, the other shareholders still continuing to work out of doors. At length, however, work was entrusted to the association, and when last year, as may be remembered, the French Government passed the Obligatory Education Act, and the city of Paris built a large number of temporary schools, the Association succeeded in obtaining a large contract. The workshops, from this moment, found ample occupation: forty men were actively employed, and the regulations fixing the working day at ten hours had to be changed, and the day extended to thirteen hours. With the close of last year, business to the amount of considerably over 5,000*l.* was being transacted. The Government School contract was not for a very high class of goods, it is true, but it kept the association afloat, and with the consciousness of their power to do better work, the members not only eagerly look forward to the next exhibition of decorative art to display their skill to the trade, but they already possess a show-room well supplied with creditable specimens of their work. Anxious in every way to meet with the approbation both of the trade and the manufacturers, the opinion of a committee of experts, composed of two of the members of their own shop and five outsiders, is taken whenever any doubt exists as to the value of a piece of work executed. A special committee looks into all the acts of the council of administration as also the organisation of the workshop. A curious passage of the report, read a few days back, consists of the complaint of the men of a want of severity on the part of their own foreman!

It seemed but reasonable that the secretary should congratulate the association on the results obtained. "Nine months ago we were nothing, and now we commence to have an horizon, restricted, it is true, but which will increase in extent if we only persevere in the direction which we have so far followed, the

enfranchisement of our class by labour and by the united action of our wills and our intelligence."

It has been determined to institute a retiring fund for the members, to be formed by setting aside 25 per cent. of the yearly profits, 50 per cent. being devoted to the dividends paid to the shareholders, who, however, are only credited with the sum till their share is completely paid up; the remaining 25 per cent. constitutes the reserve fund. The expenses of the first outlay for tools, &c., will be entirely paid off by retaining annually 10 per cent. of the sum expended: hence in ten years' time the whole will have been paid for and yet the shop kept well abreast of current improvements. For this fact of the use of every aid which modern science gives the workman is one of the features of the new association. Time was when the aid of machinery was looked upon by the working classes with something more than mere suspicion; the fate of the first stocking loom, the story of how the *Times* was first printed by steam, are present to every one's memory. Now, however, these sentiments, the result of the want of knowledge, have fortunately died out. "In the present day," we quote from a recent report on the furniture trade, "the working classes have recovered from the first alarm, and not only accept the aid of machinery, but recognise its immense benefits not alone in the present, but especially in the near future; and if, instead of leaving the powerful aid of machinery in the hands of the masters, we, through co-operation, become possessed of its assistance, we shall soon see the day's labour reduced to the work necessary to supply the demand, and the leisure created by the improvement of the tools used in our trade will afford that bodily repose so necessary to the workman to procure those intellectual enjoyments of which he is in such need, and which are so full of charm."

This acknowledgment of the admitted benefits of machinery is,—as remarked, not long since, in quoting the above passage, our contemporary *Le Temps*,—an important step in the intellectual evolution of the working classes, which, by this very confession, implicitly submit to the discipline created by the employment of machinery; for where machinery is largely used a unity of direction is absolutely necessary, and a rigorous application to all employed of a series of well-considered workshop rules. Conformity to these principles has been the secret of the success of the humble association the organisation of which we have considered it might not be uninteresting to many of our readers to make known on this side of the Channel, where the unsatisfactory relations of capital and labour are scarcely less productive of suicidal disagreement than among our industrious neighbours.

AN OLD FLEET STREET TAVERN.

"Foreigners remarked that the coffee-house was that which especially distinguished London from all other cities; that the coffee-house was the Londoner's home, and that those who wished to find a gentleman commonly asked, not whether he lived in Fleet-street or Chancery-lane, but whether he frequented the Grecian or the Rainbow."—MACAULAY.

AN ancient Fleet-street tavern, whose struggle for existence during the last two or three years would seem to have been a mockery of the past and an unavailing protest against the present, is about to share the oblivion which overtook Temple Bar,—the big yet younger brother as it were by whose side it stood so long for protection. The Bar and Child's old bank have alike disappeared. The houses between Bell-yard and Chancery-lane are pulled down; there is nothing save a much-derided statue to mark the boundary between London and Westminster; and now we learn that the City Commissioners resolve to sell the Cock Tavern by auction. Ben Jonson immortalises many of his chosen haunts; another laureate sings the praises of the Cock. But Tennyson's "Monologue" dwells not so much upon the tavern or its history, as upon the reflections it inspires in one who carries thither an uneasy yet desponding mind withal. The Cock claims to date from the days of King Charles I.; nor does its quaint old-world interior belie the tradition. The curtained boxes, the floor, the Jacobean fire-place, the clay pipes and screws of tobacco, even its pewter mugs and china trays, all tell of a bygone age, and of frequenters whose manners and mode of life were different from our own. The windows look upon a court which commemorates by name the "Apollo" at the Devil on the opposite side of the street. Over the entrance of the narrow passage which leads to the bar or "snuggery," stood the gilded effigy said to be the handiwork of Grinling Gibbons. In the bar is preserved a little box containing an old copper token, which bears the figure of a cock, and an inscription, "C. H. M. Att Temple Barr, 1655." The house itself escaped the ravages of the Great Fire, which consumed a part of the Temple, but stopped at the Temple Exchange Coffee-house, the first to be rebuilt after the conflagration. In the *Intelligencer* for 1665 (No. 51) appears an advertisement of the closing, during the Long Vacation, "of the Cock and Bottle, commonly called the Cock Alehouse at Temple Bar," with a notification that all persons having accounts with the master in farthings belonging to the house should repair thither before the 8th of July current to receive satisfaction for the same. Here, in a tavern which is mentioned in Defoe's "History of the Plague," we may picture to ourselves Pepys entertaining Mrs. Pierce and Mrs. Knipp at the lobster supper, when they drank, as he tells us, "and sang, and mightily merry." Both these ladies are frequently spoken of in the Diary: generally under circumstances of which Mrs. Pepys would probably not quite approve. The latter, indeed, was a married actress at the King's House, though very little is known of her beyond what is chronicled in Pepys's work. To the student of former times and former manners the annals of the Cock, and the many coffee taverns in its immediate neighbourhood are replete with interest. Whilst the fops and beaux thronged together at the Cocoa Tree, the Thatched House, and the St. James's, the republic of letters would assemble in the vicinity of Covent-garden and Temple Bar; the learned professions and men of rank in all of these, as well as at Cornhill and about St. Paul's. At the first named no form of tobacco other than highly-scented snuff was tolerated for a moment; in the rest, smoking was universal and perpetual. Steele, in the first article of his *Tatler*, bids his readers to look under White's Chocolate House for all accounts of gallantry; for poetry under the title of Will's Coffee-house; for learning, under that of the Grecian; whilst to the St. James's they must turn for all news, foreign and domestic.

Of the clubs which met in these resorts the earliest was perhaps that held in the Apollo-room of the St. Dunstan's, or Old Devil Tavern, kept by Simon Wadloe,—Jonson's "old Sim the king of skinkers,"—next door to Child's bank. For this, as founded by himself, Jonson, with the rules of the Roman entertainments in view, drew up his *Leges Convivales*, twenty-four in number, beginning,—

1. Nemo asymbolus nisi umbra huc venito.
2. Idiota, insulus, tristis, turpis, abesto.

And from the fourth of which (Nec lectæ fœminæ repudiantor), it would appear, women of repute were admitted. Beneath his bust over the door were engraved on a black marble slab his lines,—

> "Welcome all who lead or follow,
> To the oracle of Apollo,—
> Here he speaks out of his pottle,
> Or the tripos, his tower bottle:
> All his answers are divine,
> Truth itself doth flow in wine," &c.

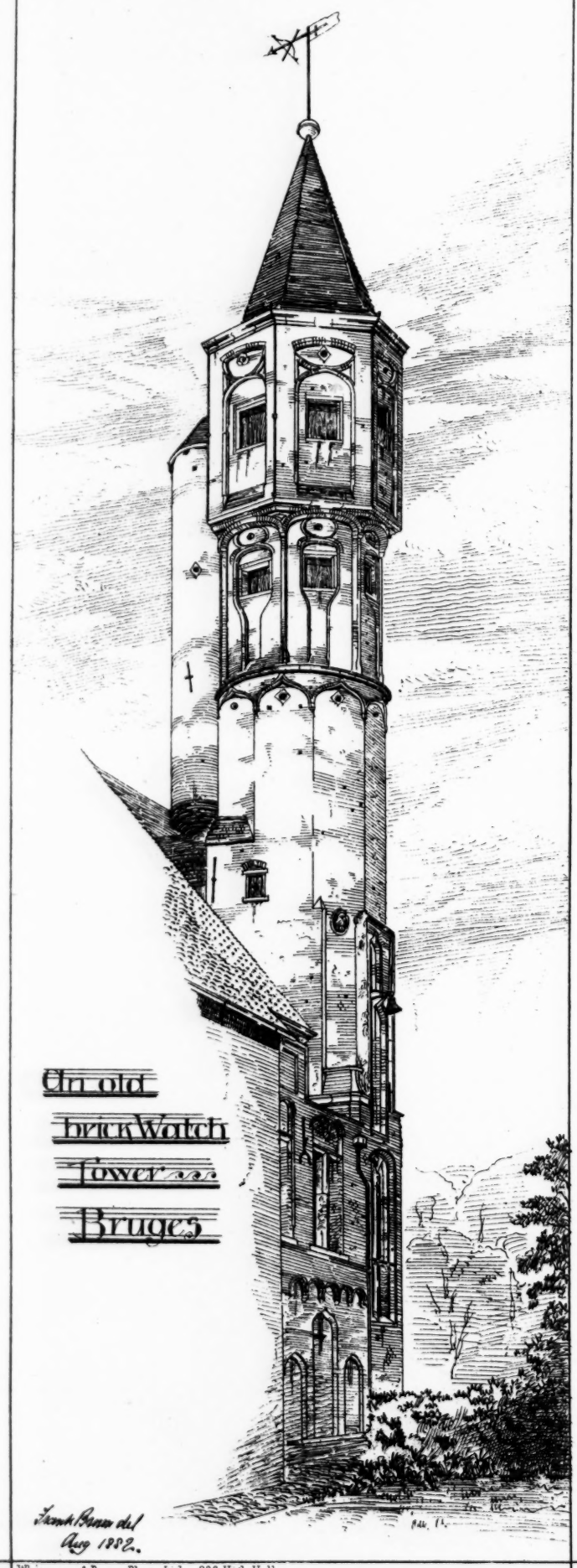
This tavern and the adjoining house were purchased in 1787 by Messrs. Child for 2,800*l*. They soon after pulled down the Devil, and Child's Place was erected on its site. In a print of 1774 the Apollo appears as a large and lofty room, furnished with a music-gallery. It was frequently used for balls and the like, and here Dr. Kenrick delivered his lectures upon Shakspeare. Multiplying under the Commonwealth, when at Puritan coffee-houses no oath was heard, and, in the words of Macaulay, lank-haired men discussed election and reprobation through their noses, the clubs acquired their more modern character in the days of Addison and Steele. In Dryden's time the wits gathered in the open coffee-room, but it is in the clubs of the *Tatler*, the *Lounger*, and the *Spectator* that we first meet with the closed doors, the regular membership and other features of to-day. Except wit, ladies, gallants, and good morals, there is nothing, says Leigh Hunt, that you hear more of in these writings than clubs, and he might have added the coffee-houses and taverns in which they collected. What is more exquisite, indeed, in its way than Steele's account of the *Spectator's* Club or of the Society at the Trumpet, among whom he has passed almost a sixth of his time "for these last forty years"? Of "the very insignificant fellow, but exceeding gracious," who maintains "an insolent benevolence to all whom he has to do with"?* So we have the Kit-Kat (Whig) and October (Tory country gentlemen and beer-drinkers), the Fringe Glove (a set of dandies); Estcourt's Beefsteak Club; Pope's Little or Short Club; the She-Romps, who once a month demolished a prude (which might have been due to Lady Mary Wortley Montague); Addison's Tall Club; Bishop Pearce's Silent Club; the Hebdomadal (a set of quid-nuncs); the Hum-drum and Mum Clubs, who ingeniously smoked and held their tongues; and, to descend lower in the social scale, the Choice Spirits, and the Harmonical Society, of which Goldsmith gives us so delightful a picture. Jonson's Apollo was differently constituted from that more refined concourse at the Mermaid, where he would encounter Shakspeare and Beaumont. Perhaps he there had things more to his own way, and could sit in his "throne of human felicity" more at ease with himself and with them who would flatter a vanity to which Jonson, as every one else, was no stranger. "I dined to-day," says Swift, in a letter to Stella, "with Dr. Garth and Mr. Addison at the Devil Tavern, near Temple Bar, and Garth treated." It is conceivable that Swift did not thoroughly enjoy his repast, for he was then beginning to feel awkward with his Whig friends, of whom Addison was one, whilst Garth had a few weeks before written in behalf of the fallen Godolphin a defence which their common acquaintance, Prior, himself once a Whig, had vehemently attacked in the *Examiner*. At the Devil Dr. Johnson presided over a supper party in honour of the publication of Mrs. Lennox's first book. The Rainbow, close by, is said to have been indicted in former times for the "nuisance" of selling coffee. Thus can we figure for ourselves who they were, and how they diverted one another, that frequented the famous taverns and coffee-houses beneath the shade of Temple Bar. And though the accustomed haunts gradually vanish from a scene upon which they once opened their doors so kindly, Will Honeycomb, Captain Sentry, or the Bencher who knew Jack Ogle, are to some no less real than they who crowd the street this day: still can one imagine that

> "Supper and friends expect me at the Rose."

Electrical Experiments. — A series of experiments were made with the Elphinstone and Vincent dynamo machine, on the evening of Wednesday, February 21st, at Messrs. Unwin Brothers' printing-office, The Gresham Press, Little Bridge-street, Ludgate-hill, in the presence of a large company. The guests assembled in a large warehouse on the first floor, along the ceiling of which, and grouped together, were suspended 350 Swan incandescent lamps, each of 20-candle power. These were brilliantly illuminated, and produced a most dazzling effect. Lord Elphinstone explained that the machine was capable of driving 416 Swan lamps, but owing to delay only 350 could be set up. Among other experiments shown, a length of about 40 ft. of galvanised iron wire ⅛-in. thick was rendered red hot. As the heat increased the zinc burnt off in brilliant coruscations, forming an electrical firework of great beauty; the heat still increasing reached whiteness, and finally the wire fused, parts of it as it struck the floor breaking up into brilliant globules of melted wrought iron. Lengths of steel, and also copper wire, each became in turn incandescent, the steel being fused. The current was then made to run through a coil of iron wire immersed in a glass vessel holding three quarts of water; instantly there was a hiss as when a red-hot poker is plunged into water. This was followed almost immediately by steam; in half a minute the water boiled, and before a minute had elapsed half the contents of the vessel was on the floor. An ordinary steel flat file 1 in. by ¼-in. was then placed instead of one of the carbons in an arc light, and the current being passed through, the end of the file was melted and consumed like a tallow candle in a fire, throwing off a shower of sparks with a Catherine-wheel-like effect.

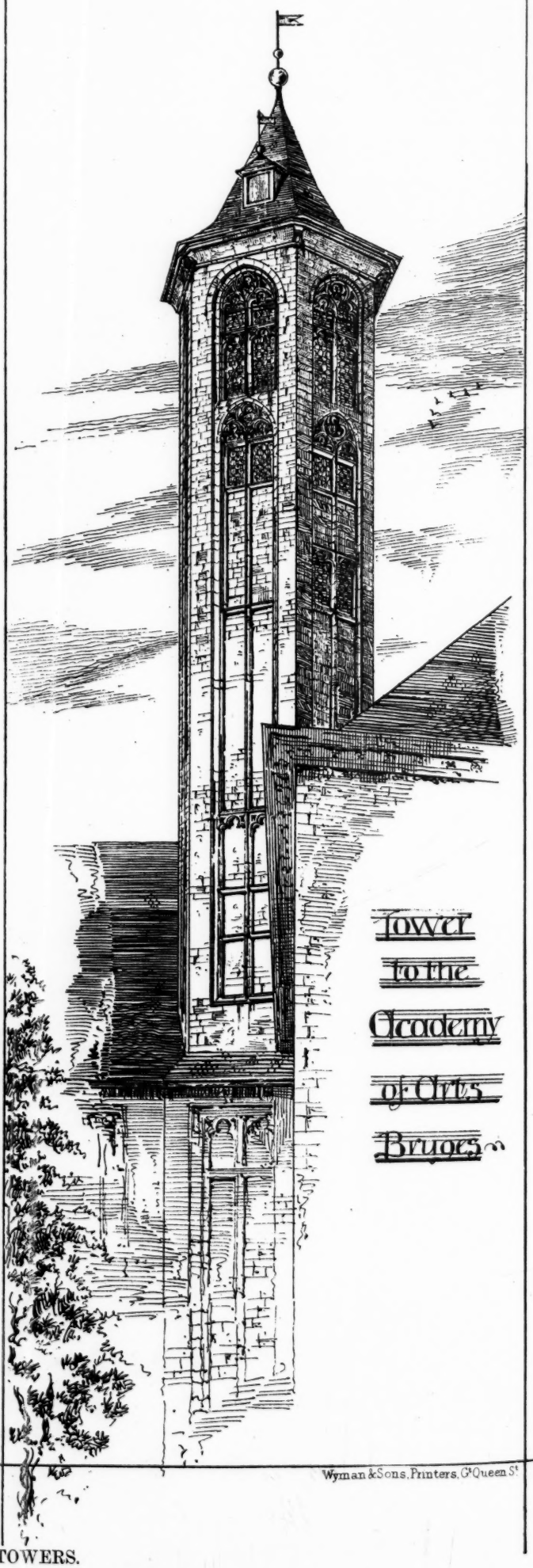
* See *Spectator*, No. 2, and the *Tatler*, Nos. 127 and 132. For an account of the Trumpet in Shire-lane see the *Builder*, vol. xliii., p. 774 (December 16th, 1882).

TOMB OUTSIDE CAIRO.



An old brick Watch Tower at Bruges

Frank Brown del Aug 1882.

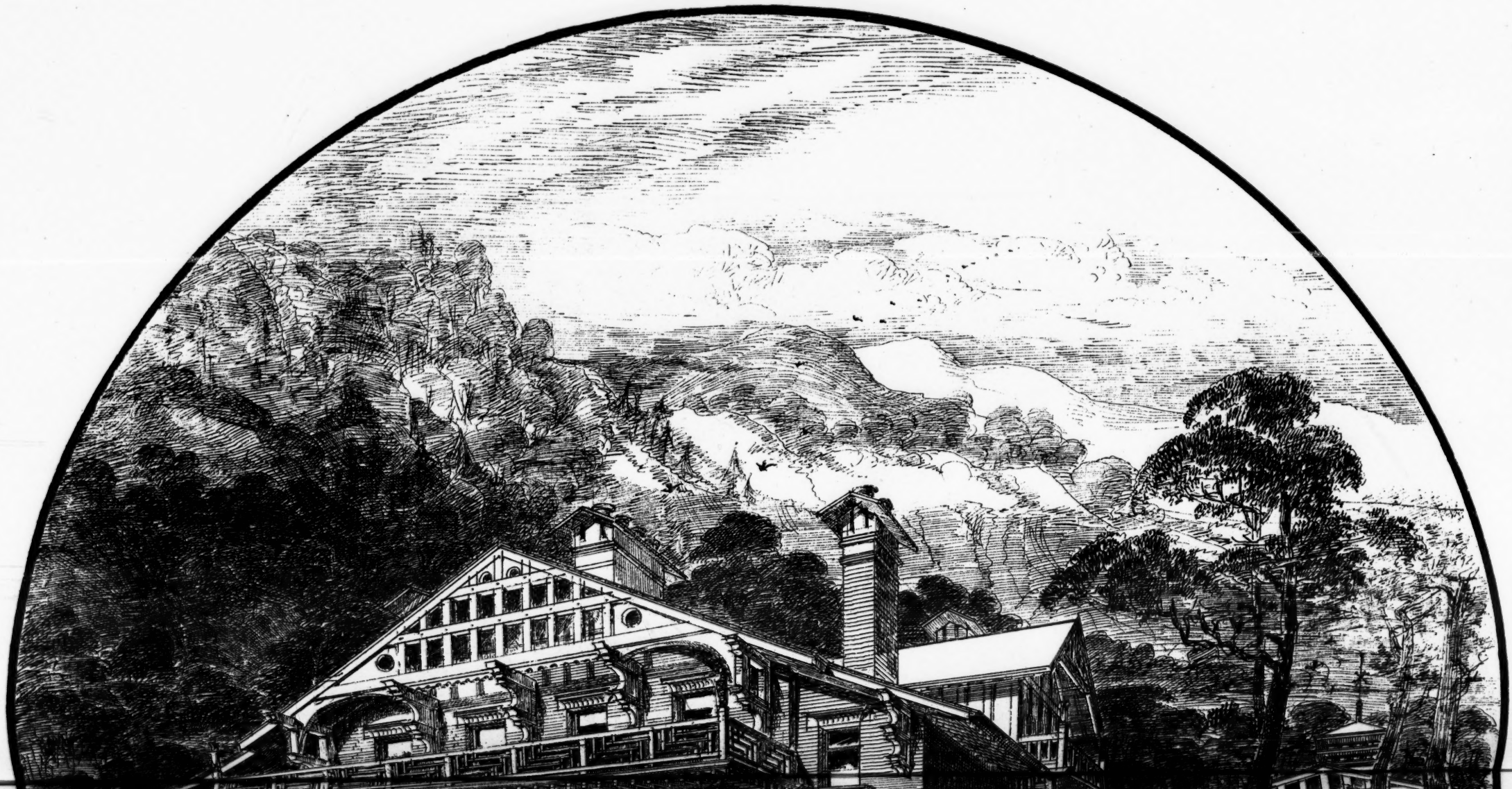


Tower to the Academy of Arts Bruges

Whiteman & Bass, *Photo-Litho* 236 High Holborn.

Wyman & Sons, Printers, G^t Queen S^t.

BELGIAN TOWERS.

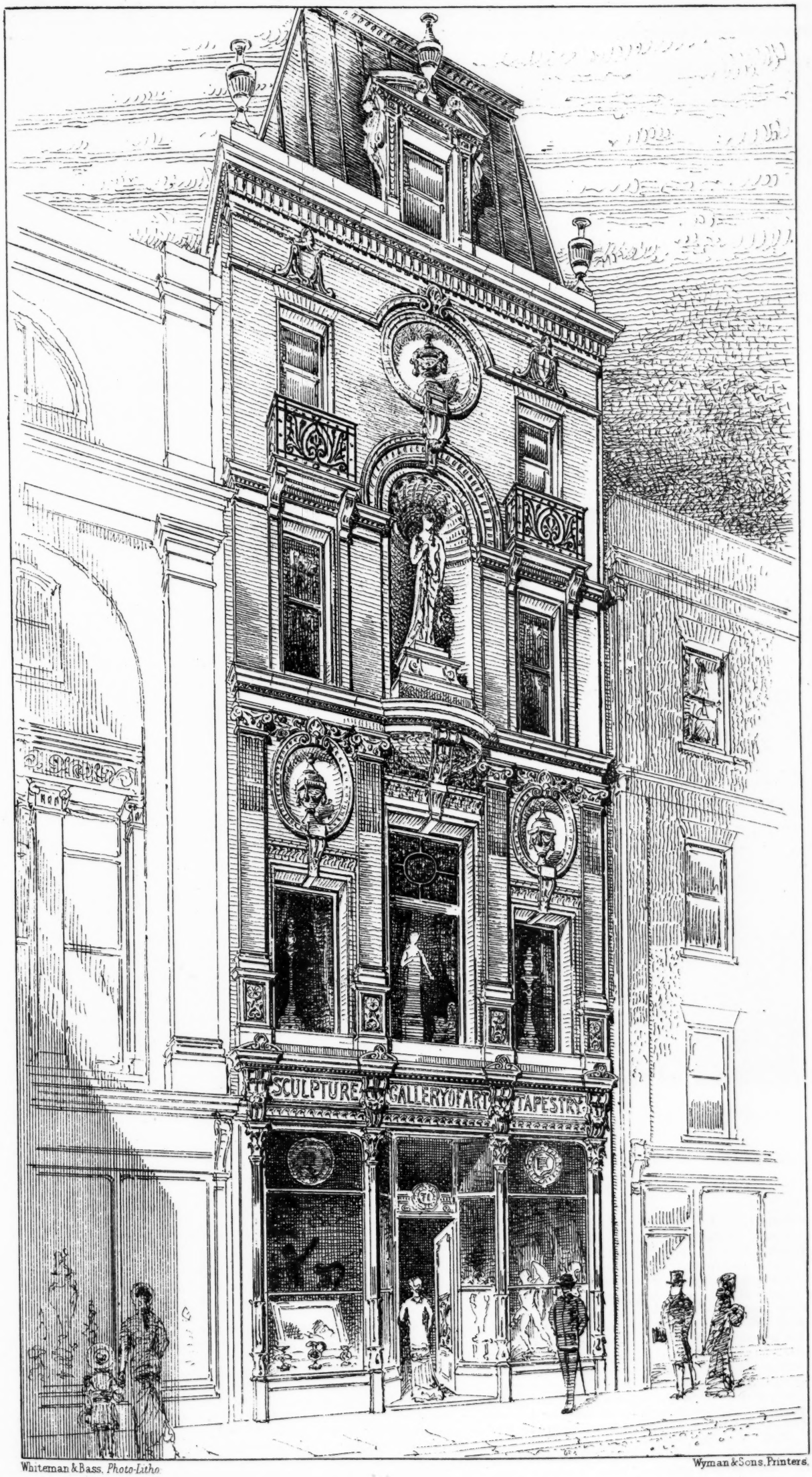


CHALET RESIDENCE. HARROW PARK FOR D. BROWN ESQ.RE

T. T. WALFORD. ARCHITECT.
82 BUCKINGHAM CHAMBERS STRAND. W.C.

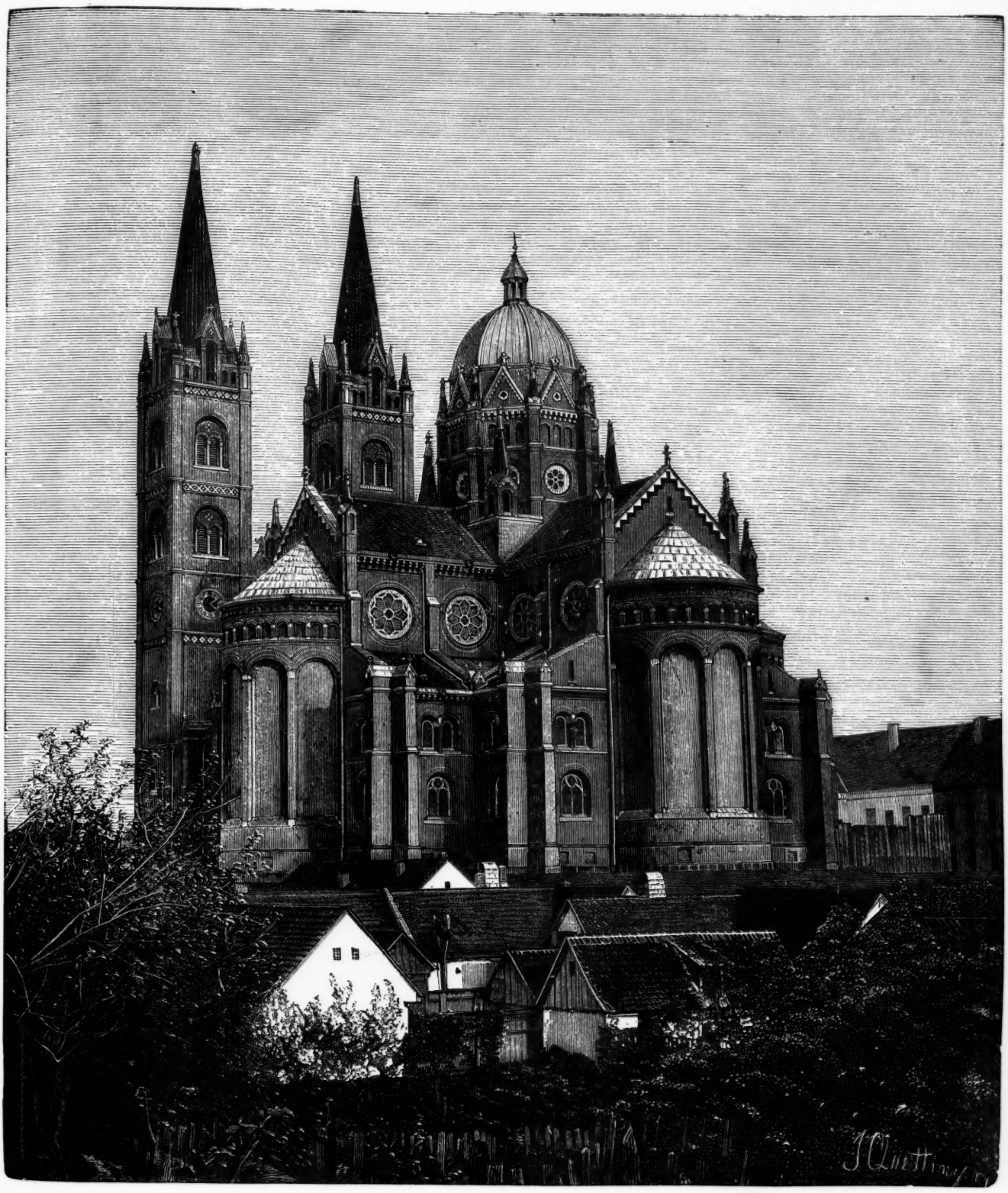
Wyman & Sons, Photo-Litho. 238 High Holborn

Wyman & Sons, Printers, Great Queen St.



Whiteman & Bass, *Photo-Litho.* Wyman & Sons, Printers.

A HOUSE IN THE STRAND.——Messrs. Archer & Green, Architects.



DJAKOVAR CATHEDRAL, CROATIA.——CARL RÖSNER, VIENNA, ARCHITECT.

A NEW CROATIAN CATHEDRAL.

THE new Cathedral of Djakovar, an otherwise unimportant town of Croatia, is, as will be seen by the view which we give of it in this week's *Builder*, a striking building, and a remarkable monument of the Croatian nation, bearing testimony to the progress of this South Slavonian race. The movement for erecting a cathedral in Djakovar was started sixteen years ago, by Bishop Strossmayer, who also consecrated the building, on October 1st of last year.

The new cathedral is in the Romanesque style, the latter regarded as a union of Byzantine and Gothic forms, being considered especially suited to illustrate the tendency according to which the Croatian nation believes itself called upon to carry Western civilisation towards the East. The church is in the form of a Latin cross, the stem of which forms the nave, the two transepts representing its arms. The choir and the transepts terminate in apses adorned by high arches. The principal façade consists of two clock-towers, also in the Romanesque style, 252 ft. high, provided with clocks and round-headed windows, the upper story being adorned by turrets at the angles, and canopied openings between. Three front portals, leading to the nave and aisles respectively, rest upon columns with cubes as capitals. In the upper panel of the principal portal is a relief of the Saviour, while St. Peter, the patron saint of the cathedral, and the Sclav apostles, Cyril and Methodius, fill the triangular panels of the side portals. Above the intersection of the nave and transepts rises a lantern terminating with a cupola,—the Kuba. The side walls of the cathedral are pierced by many large and small semicircular-headed and rose windows, while the three apses have each five arches resting upon pilasters, above which runs a blind gallery round the semicircle of the apse. Within are found Corinthian columns and dem.-revetted pillars, the capitals of which are adorned by leaf ornaments. Corresponding with the building above ground, the crypt has four altars and rows of columns. The sanctuary and the transepts are four steps higher than the nave and aisles, in accordance with the traditions of the Romanesque style in Germany. The cathedral has, besides the principal altar, dedicated to St. Peter, seven smaller altars.

The plans of the cathedral were prepared by Herr Carl Rösner, Professor at the Academy of Arts of Vienna, and the builder of the Church of SS. Cyril and Methodius, Prague. Dombaumeister F. Schmid, of Vienna, and his disciple, Herr H. Bollè, of Agram, assisted in the erection of the cathedral. The cost of the building was 200,000*l*. The frescoes have been painted by the two Seitzs, father and son, of München. The pictures represent scenes from the New Testament and the lives of the saints.

TOMBS AT CAIRO.

PERHAPS the most remarkable structures at Cairo are the tombs of the Caliphs and the Memlook kings. They are for the most part situated in two large groups outside the walls of the city. There are, however, others, and those probably, the earliest in point of date within the walls of the city; one of the latter is the only existing tomb of what was formerly a large group erected to the memory of the caliphs of the Eiyoobite dynasty. The Caliph Eiyoob, whom this monument records, died in 1250. Why all the others of this group have been destroyed it is difficult to say.

The beautiful tomb which we illustrate is one situated outside the city walls, and forms one of that group called "El Kaitbay" from Kaitbay or Káëdbai, being the most important Sultan of the dynasty which these edifices commemorate. Sir Gardner Wilkinson calls these the tombs of the Circassian Memlook kings, and informs us that the first Sultan of this dynasty was El Bêrkook, who repulsed the Tartars under Tamerlane in 1393. The largest of these tombs, that to Sultan Kaitbay, dates from the year 1496, and is a rich example of Egyptian Pointed architecture, though from having had a large mosque attached to it, it is less symmetrical than the example which we illustrate, and wanting in the simple dignity and beauty of the latter. Like all Mahomedan buildings, it is quite impossible to judge of the date from its style; it looks, at first sight, to be earlier than the Mosque of Touloon, which is more decidedly Gothic, and has the pointed arch far more strongly developed, yet if the dates ascribed to these monuments are correct, Touloon is five centuries, at least, earlier! The date given to the Mosque of Touloon, 879, seems almost incredible, even allowing for the stagnation of Mahomedan art, and we should not be in the least surprised if some one were to discover that no portion of the present building was in existence before the year 1100. It used at one time to be supposed that the Temple of Denderah was a work of the time of Rameses the Great, but now we know positively that it could not have been erected before the time of Trajan.

We do not for one moment say that this is also the case with the Mosque of Touloon, because we have no means of ascertaining the facts concerning that building; but we repeat that we should not be surprised at finding that it dates from the twelfth instead of the ninth century. Even if this were the case, it would still be doubtful whether Cairo may not claim to have been the first city in the world where a "Pointed Style" was developed. The whole question is one of considerable interest, and the examples of Mediæval architecture are so remarkable, so singularly beautiful, and offer so many hints for design, especially as regards domical construction and the use of the dome in combination with the pointed arch, that they deserve to be most carefully preserved and protected, and we venture to suggest that the English nation should not let slip the present opportunity of impressing upon the Egyptian authorities the duty of preserving these beautiful monuments. They have in past times been most shamefully neglected; in fact, the tombs outside Cairo have served as stone quarries, and nothing has been done to protect them from destruction. It seems strange that the present rulers of the country should have exhibited no respect or reverence for the tombs of their ancestors.

A NEW HOUSE IN THE STRAND.

WE this week illustrate the front elevation of the new building, 71, Strand, just completed for Mr. George Attenborough, from the designs of Messrs. Archer & Green, of Buckingham-street, Adelphi.

The new building adjoins Mr. Attenborough's old premises at the corner of Adam-street, and is faced with rubbed and gauged red brickwork, with ornamental adjuncts of red terra-cotta, modelled from the designs of the architects and executed by Messrs. Doulton & Co. The vases, &c., in the niches, have been selected from Mr. Attenborough's collection, and are good specimens of terra-cotta work.

The ground-floor of the premises is occupied by the shop, the fittings in which have been made by Messrs. Yardley & Son, of Clerkenwell. The upper portion of the premises is occupied as show-rooms for works of art, and although direct light could only be obtained from the front by the liberal use of Hyatt's lights under skylights, every part of the building appears to be adequately lighted.

The building has been executed by Messrs. Bywaters, of King-street, Regent-street.

CHÂLET RESIDENCE, HARROW-ON-THE-HILL.

WE have given a view of one of two châlet residences now building in the private park, Harrow-on-the-Hill, for Mr. David Brown. The plans of these houses are identical, and the works are being carried out by sub-contracts under the superintendence of the architect, Mr. J. T. Walford, of Buckingham Palace-road. We will give a view of the second on a future occasion.

BELGIAN TOWERS.

THE tower of the Academy of Fine Arts, Bruges, is a well-proportioned Gothic tower, built of stone, and has a slated roof. The main building occupies a fine position, with a large open space in front.

The illustration called a "Watch Tower, Bruges," is part of an extremely picturesque old building, situated near the banks of one of the canals of the town, and is built principally of red brick, with a slated roof. The lower part of it is used as an inn, and has a bowling-alley and archery-ground attached.

THE ANCIENT RESTING-PLACES OF THE DEAD.

SIR,—In an interesting article in last week's *Builder* on Croxall mound, which the writer supposes to have been created for the purpose of defence, he mentions the discovery in 1800 of human remains, but he does not seem to consider it to have been a place of interment, because, in its evident antiquity, it possessed no evidence of cremation, and contained neither urn nor cist. Now many of these mounds having the appearance of once being fortifications, are undoubtedly places of early Christian burial. They, the simple founders of our faith, committed their loved ones to the earth in the most simple manner,—scarcely 3 ft. from the surface of the ground; and up to the ninth century upon an elevation raised above the surrounding ground, embodying, it has been supposed, the Scriptural principle of a church set upon a hill. In some cases the shallow graves, where stone could be obtained, were lined with that material; in others, a simple mortuary cloth enveloped the remains. I was present in the Isle of Man at the discovery of one of these graveyards of very ancient date, — probably of the fifth century,—and a brief description of it may be interesting to your readers. It was situated at the small hamlet of Ballayqueeney, on the road to Port St. Mary, and consisted of a bed of gravel having a gradual slope, but falling with a declivity to the road on its south-western side, and where we came upon the human remains it contained, it had little to distinguish it externally from an elevated portion of the surrounding fields, but the character of the first interment uncovered stamped it at once as a most valuable discovery. About 3 ft. below the surface, and upon the removal of a few slabs of stone, there lay in a narrow stone-lined grave the perfect skeleton of what must once have been a tall and powerful man, as red as the rust of iron. One of these graves contained two skeletons, those of a man and woman. Most of the bones crumbled to dust on exposure to the air. Adhering to the stone in some cases was a fibrous substance, which might have been the remains of a textile material; but in most of them only some red dust lay scattered over the soil. The direction of all early Christian burials varies considerably, as do the chapels, usually built on the most elevated portion of the site. This was, no doubt, partly due to the position of the sun on the horizon on the morning of the saint's day to whom the chapel was dedicated.

It is only when sufficient evidence exists, such as the position or direction of the remains, the discovery of their having been subject to cremation, or the bodies having deposited with them weapons, or ornaments, or vessels either of stone, or bronze, or iron, that a satisfactory date as to their interment can be determined. The Isle of Man is full of these records of the past. The Druids, it may be, the Pagan hordes of Northern countries, the inhabitants far back in a remote period of that great storehouse of antiquity, the sister isle,—almost as mysterious in its hints of ancient learning as the tombs of Egypt,—have enriched the soil, especially of the Southern part of the Isle of Man, with the ashes of their dead. It is, therefore, extremely difficult to separate later burials, where even tradition is dumb, and in neighbourhoods where undoubted Pagan relics have been found, from those of an earlier date. The discovery, for instance, in the south, adjacent to the graveyard above described, of a Celt of early formation, a bronze hatchet-head, and innumerable Runic remains, is liable without very careful investigation, seriously to mislead. A grave is opened in some place where no traditional record can at first be gleaned, and of which the memory even of the conventional "oldest inhabitant" is a blank. The silent agency of a natural law has left behind only a few dry bones, and beyond the attitude in which the body has been placed,—not unfrequently without even this slight clue,—there may be nothing to indicate the length of its repose. The ignorance of the discoverer and the requirements of the living may carelessly or wilfully efface the witnesses which exist, and the mysterious and silent sleeper of a thousand years may vanish in an instant into dust.

The chapel of St. Luke and the ancient burial-ground ("Cronk-na-Irey-Lhaa") of the Danish kings are situated in the parish of Kirk Christ Rushen, and two miles from the village of Dalby, and are supposed to have been originally a Scandinavian settlement. This bears a strong resemblance to an ancient fortification, even to the causeways or ditches bounding the central hillock on three sides, the fourth being towards the sea. Mr. J. R. Oliver gives the following description of early Christian burials in the Isle of Man:—

"The burial of the dead in the Isle of Man was essentially a religious belief, involving a lively faith in the resurrection; consequently the selection of a burial-place,—the *ubi resurgere*,—where the dead might rest in peace to rise again in glory, was an object of the utmost importance. Hence these cemeteries usually occupy picturesque and retired localities, with little to awake the sympathy of the casual visitor except the sanctity of the place. They contain no monumental stones or other memorials of the dead to indicate who rest below, but great and small lie mingled together without distinction, in the one common hope of a joyful resurrection. The mode of inhumation practised was as follows:—A grave, 3 ft. deep and 2 ft. wide was dug east and west, and lined with flag-stones to the height of 15 in.; in it the corpse was laid wrapped in a mort-cloth; a few shovelsful of earth and a layer of sods completed the remainder. No implements or relics of any kind were entombed along with it, but the whole betokens the simple burial of the early Christian church.

It sometimes happens that two and even three bodies rest in the same grave. When this is the case, they will be found to lie on their sides, with the lower extremities semi-flexed. In consequence of this the stone coffin is much smaller in size than is usually the case, and has more the appearance of a child's than an adult's burial. Very seldom the remains in these graves will bear handling, unless the surrounding soil happens to be of a dry and sandy nature. Their colour is generally of a rusty iron or tan hue, caused by the quantity of ferruginous matter contained in the schistose formations of the island."

Gradually the mortuary chapels in the centre of these graveyards became of more importance, the walls being of irregular masonry, without mortar or cement, the interior paved with pebbles. In England and Ireland the early examples, of the fifth century, were built of wood and wattles, but in the Isle of Man they consisted, at this period, only of earth and sods, interspersed sometimes with large stones. It can be easily conceived how soon so frail a structure would, in succeeding ages, be swept away and leave only the mound and the silent witnesses below.

Standing among those children of a bygone period, who had lain in their narrow stone-built chambers undisturbed by the historical changes, it might be, of twelve hundred years, I was irresistibly reminded of the beautiful commencement of Tennyson's poem,—

> "Dust are our frames and gilded dust our pride,
> Looks only for a moment whole and sound,
> Like the long-buried body of the king,
> Found lying with its urns and ornaments
> Which, with a touch of light, a breath of air,
> Shrank into ashes, and was found no more."

In a very short time every vestige of these

remains was swept away, the bed of gravel of which the field consisted being taken for the railway then in progress, only the tradition of this discovery remained. BYNG GIRAUD.

AN ARCHITECT ON LAWYERS.

SIR,—It is always to be regretted when members of one profession go out of their way to speak ill of those who belong to another profession. Moreover, if any person thinks it his duty to criticise any body of men harshly and adversely, it should only be done after the most careful consideration. But if such criticism is hasty and ill-founded, it can only recoil on the head of the critic, and breed ill-will where there should be complete friendship. And it is right to say that Professor Kerr's remarks at the Architectural Association on the 16th ult., as reported in your issue of February 24th, are much to be regretted. His first assertion was that as "lawyers were increasing in numbers to an alarming extent, it followed that disputes were increasing in number and in inveterate bitterness." I should like to ask Professor Kerr whether before he made this assertion he had ascertained that lawyers were increasing out of proportion to the general increase of population, or faster than architects and surveyors and builders, and whether disputes were increasing also out of proportion to the increase of population. Further than that, has he any foundation for the assertion that disputes are increasing at all? For there are many who think that litigation has, during the last few years, to judge from various data, actually been on the decrease. What, too, is his evidence that disputes are now more bitter than they used to be, and why does he ascribe this bitterness to lawyers? No respectable lawyer endeavours to foment quarrels, and though there are black sheep among lawyers as among architects, yet it is untrue to lay it down as a general rule that lawyers increase quarrels. The lawyer is generally called in when the dispute has become thoroughly embittered. The assertion of Professor Kerr is all the more remarkable because he states that "he had been concerned in a great many cases of litigation for a great many years," and therefore has clearly been an abettor of litigation, if we may use the expression. The accusation is all the more unjust as regards building disputes, and those in regard to light and air, because in every such case it is the universal experience that each side has a surveyor or architect who, from the beginning to the end of the dispute, is the most active agent in the litigation.

As to the assertion that lawyers cannot understand bricks and mortar, and that they "deal in abstractions," whatever that may mean, it is answered by the simple fact that lawyers manage to understand very intricate commercial questions, very difficult questions in regard to ships, and have constantly to get to the pith of confused questions of account. If they are competent to deal with these questions, it is difficult to see why they are incapable of managing a case which arises out of bricks and mortar. Again, Professor Kerr says that "the business of the opposing counsel was to mystify the judge." In the first place, it is constantly stated by judges that they would never get through their duties without the aid of an efficient and conscientious bar. Moreover, it must be obvious to any one who will consider the matter even for a moment that the most effective way to obtain a judgment is not to mystify a judge, but to put a point to him so clearly and so forcibly that he shall decide in favour of the advocate who does this. To mystify a judge is to leave him to take a leap in the dark. It is a well-known fact that the most successful counsel are those who can state a case most plausibly and most clearly. Professor Kerr winds up his denunciation of lawyers by insisting on the merits of lay tribunals; although in a recent letter to the Institute on the subject of the law of light, he expressly gives his opinion in favour of legal tribunals. The decisions of arbitrators, he also says, "very frequently consisted in splitting the difference and deciding the costs. That was a thing the lawyers never did. They must always have one man altogether in the right or altogether in the wrong. It should be borne in mind that the truth was to be found between extremes." Here, again, it would be desirable to have the grounds on which the Professor's views are based. He would find, if I mistake not, if he were to take at random half a dozen arbitrations before the official referees and half a dozen before Mr. Whichcord, or any other eminent architect, that in some instances one side was wholly victorious, and in some instances the truth lay between the two contentions. But to state as a general rule that lay arbitrators are best because they split the difference is, in the first place, an incorrect statement, and in the second, if it were true, is evidence of incapacity and of a desire to avoid doing a duty by always taking a middle course. As has been already said, harsh criticism can only be justified when it is based on careful investigation of facts, and an equally careful consideration of their bearings. Professor Kerr's remarks show an equal absence of investigation and of thought. To address remarks of such a character and tone to an assembly of young architects by way "of contributing what little he could to the instruction of the evening," was surely undesirable.

A LAWYER.

ARCHITECTURAL QUESTIONS IN GLASGOW.

GLASGOW INSTITUTE OF ARCHITECTS.

THE annual dinner of the members of this Institute was held in the George Hotel, George-square, Glasgow. Mr. James Thomson, Bath-street, president of the Institute, occupied the chair, and the duties of croupier were discharged by Mr. David Thomson, vice-president. Mr. William MacLean, writer, the secretary, intimated that letters of apology had been received from Professor Veitch, and from Messrs. James Salmon, George Bell, John Burnet, and Campbell Douglas, former presidents of the Institute, and other gentlemen. After the customary preliminary toasts had been given, the Chairman gave the toast of the evening, "The Glasgow Institute of Architects." He said:—A new style of architecture is said to be a want of the time,—this has, indeed, been said for many years. It has also been said that there is no more use for a new style in architecture than there is for a new language. In the meantime, I fear we must be content to remain without any very extreme novelty in architecture; for with all the modern building, Paris has not begun, nor has London led, the fashion. The architects of the present day, instead of endeavouring to follow up the outline of a new style, are too apt to fall back upon a useless phase of design about 150 years old, which was turned aside by their predecessors, and thought to be buried out of sight along with the men of the same period. No doubt, in 1850, Joseph Paxton assisted in the creation of a style of building for the Great Exhibition of 1851, which has ever since become useful and necessary for many purposes. A style very much criticised and cried down by architects and men of very fine taste, it has for all that found a place for itself; for the Crystal Palace was admirably adapted for its purpose, or for any purposes where light without impediment is required. The ancient idea of bulk and strength here gives way to strength and lightness, and I say it is far better to run the gauntlet of criticism,—that iron construction is incompatible with true architecture,—than to ignore the new demand for construction with plenty of light to suit business requirements. And I am not sure that amidst all the buildings put up for exhibitions or warehouses since 1851, that there has been anything better in that direction. As architecture is a progressive art, our members ought always to be on the alert, so as to assist in its development. While the architects of Glasgow have always endeavoured to advance in the better class of construction and embellishment of the buildings entrusted to their care, there is cause for thankfulness that the citizens have always been willing and able to give the money that was necessary. No one that has known Glasgow of the past generation has failed to see the interest that has been taken in the careful laying out and building up, not merely the new portion of the town, but also in the remodelling of old parts, now removed and replaced by modern work, and I think we need not be ashamed to say that the members of our Institute have been the means of bringing this state of things about, men who, if not originally of Glasgow, have become identified with it because of their work. The City Improvement Trust scheme has done much to develope the resources of our members, for, as the new streets and places were opened up, there were new requirements in building. The School Board, too, has developed energy in the way of planning school buildings which for comfort, suitability, and elegance, are unsurpassed. Our Institute has always considered it to be their duty to step forward and give advice in important matters relative to work in our city, and recently its Council has gone into the merits of two questions which have been very much before the Institute and the public. On these points I would say a few words. 1st. The competition for the new municipal buildings. On this head, probably, my remarks may be judged as one-sided, on account of my opposition to the principle of competition altogether. Certainly there has been nothing done in this fresh competition to alter my views; and while I do not grudge the successful man his prize, I think the public would have been as well suited and as well pleased with a professional man at home. Large public buildings such as these have been for some time very scarce, and the profession in Glasgow were naturally anxious about these new municipal buildings that they should get into proper hands. The Institute knowing the difficulties which beset competition arrangements of all kinds, placed themselves in communication with the Town Council with reference to the clauses of the competition. It is certainly very amusing to study the different apologies for the system of competition as given forth on the general question, for it requires a good deal of round-about argument to back up the necessity for the system. The assessor, Mr. Barry, of London, tells us that the principal points which struck him as demanding consideration were the insufficient and often contradictory nature of the instructions to competing architects; such instructions were more often than not drawn up by men totally unfitted for the task, and consequently they abounded in pitfalls for the professional men who competed. The architect for the proposed building has been appointed by the Town Council, but it was considered by many that the designs prepared by the unsuccessful competitors should also have been exhibited, but this was only done in respect of the exhibition of the ten designs, and the Institute had to undertake the responsibility and expense of exhibiting the rest of the designs. 2nd. When the new Police Bill was brought before the public last year our Institute considered it their duty to address themselves to the Town Council on the matter, and give their views relative to what they considered should be done as far as matters pertaining to buildings, street, drainage, &c., were concerned. Their views were explained in a very simple way,—that all necessary building regulations should be embodied in a Building Act applicable not merely to the city, but also to the suburbs, and asking for delay. No wonder, then, that our members were disappointed at the way in which they were passed over and their overtures for meeting rejected by the Town Council until the last moment, when there was no time left for discussion; and the more especially that "Lord Provost Ure has all through his career taken an intelligent and warm interest in all matters relating to sanitation." It has been said that, to have a Building Act on the model of the Metropolitan Building Act, it would be necessary to abolish the Dean of Guild Court. I do not see that at all. The fact that the Dean of Guild Court having been set up at a time when there was but little work for it to do, save a lining now and then in the burgh, does not preclude the idea of the court having grown in usefulness with the extension of the city. And with a competent man like our present Master of Works, there should be no difficulty in seeing any Act relating to the buildings, streets, &c., carried out. This matter has been considered by the Institute to be one of very great impotance to all who are interested in the welfare of Glasgow. And the members expected that they would, along with others interested, be consulted in any change of the laws, and were naturally anxious to see proper clauses introduced, under a separate Act. You are aware that after the revision of the clauses in this new Police Bill the draft of it was then placed in the hands of the Lord-Advocate, merely as a suggestion for the framing of his general Bill. Our reports and suggestions will also be forwarded to him, and I trust that all the matters referred to in connexion with the new Bill will be placed on a

proper footing. Before leaving this subject I would say that there is no doubt that house-drainage should be a separate class of work, and no longer left to the wall-building masons and their labourers. I have often thought that this matter of drainage was as important as plumber work, if not more so, although the money-value of it does not come to much. These important details relating to drainage have hitherto been left too much to the ordinary contractor, and we now know too well how they have been neglected,—drain-pipes being hurried into the trenches, and covered up as fast as possible. For a time it was supposed that the stoneware glazed pipes, with all their perfect bends and joints, would make everything safe in its supersedence of the old culvert or drain, sometimes constructed with a slab-board for a sole, a brick side, and their uneven covers; but it has been found that even these piece-glazed conductors were a greater evil, in the more swift inlet of foul air, with joints made good, but the main connexions neglected, or, as I said before, when the pipes were buried out of sight, with no jointing at all. I can scarcely speak in strong enough language condemning the builder who knowingly allows the pipe-drains to be formed with a bit of clay on half of the joints, and nothing at all on the other, and the many modes of working to get this department of the contract put out of hand as fast as possible. I would add just one word, and that is with reference to the coming "Sanitary Congress" in our city, in the hope that you will take a special interest in helping it forward. I trust that in this coming exhibition of sanitary appliances, we shall have a useful exposition of everything that bears upon the subject.

FIRE-RESISTING PLASTERING.

AN interesting trial to test the merits of Hitchins's patent fire-resisting or carbonised plastering was held on the vacant Crown land on the Victoria Embankment, at the bottom of Whitehall-place, on Tuesday last, in the presence of representatives of H.M. Office of Works, the Metropolitan Board of Works, and of a large number of architects and others interested in the subject. For the purpose of the experiment, a brick building, containing two rooms, one above the other, was erected, but without any staircase or other means of communication between the room on the ground-floor and that on the first floor. The ceilings of both rooms were constructed in the following manner:—Wood joists, 7 in. by 2½ in., were laid 1 ft. apart. To the under-sides of these joists, galvanised iron wire netting, with meshes of about 1 in. or 1¼ in. in diameter, was stretched and properly secured to form a key for the fire-resting plastering, which in this case was 2 in. thick. The plastering may either be put on with the trowel, or poured through the joists from above on to a temporary platform or centering of boards fixed below the under-sides of the joists, this platform being readily removable when the plastering has set.

This plastering contains a certain proportion of pounded coke breeze. Towards the upper sides of the joists, wood fillets are fastened, and upon these fillets slabs of the patent plastering material, previously prepared, and 1 in. or more in thickness, are laid so that their upper surfaces are exactly flush with the tops of the joists, thus leaving an enclosed or confined air-space between the joists. The floor of the room above is laid with ⅞-in. boards in the usual manner. It is claimed by the patentee that with this method of construction, which is obviously easily applicable to all houses, a fire which may break out in any room will be unable, at any rate for a very long time, to make its way either upward or downward through the ceiling or floor. The crucial tests which were made on Tuesday last appeared to sustain that claim. The room on the ground-floor was half filled up with a large pile of wood faggots and shavings, over which, previously to ignition, paraffin oil was copiously poured. A similar pile of combustible materials was made on the flat top of the building (representing the floor of the second story above the ground). These two fires were simultaneously kindled, and burned furiously for about half an hour, thus attacking the first-floor room from above and below, but without appreciably increasing the temperature of this intermediate apartment, and without any smoke passing into it except by the open window, which (reached by an outside ladder) was used for the entrance and exit of visitors. A fire was then kindled in the first-floor room, thus attacking both floors from above and below. At the end of a quarter of an hour or twenty minutes longer the fires were all extinguished by means of water, and when the building was sufficiently cooled down, portions of the plaster were hacked off to expose the joists, which, except on their upper edges upon which the floor-boards rested, were found to be not in the least degree charred. The patentee, while not claiming for this method of ceiling and floor construction that it is absolutely fireproof, maintain that it is, in a high degree, fire-resisting, and no one who witnessed the ordeal to which it was exposed on Tuesday last could come to any other conclusion. Of course all good plaster work is more or less fire-resisting, as the patentee admits, but he claims for his method of floor and ceiling construction (irrespective of the composition of the plaster) that it is almost impossible for the joists to take fire or burn in the confined air-space which is formed between them. One precaution that would have to be taken, however, would be to use only well-seasoned timber, in order to prevent dry rot. The patentee intends applying his material to the protection of iron columns and girders, but always with an air space between it and the iron.

THE HISTORICAL DEVELOPMENT OF ORNAMENTAL ART.

UNDER the auspices of the Painters' Company, Dr. G. G. Zerffi, one of the examiners and lecturers of her Majesty's Department of Science and Art, commenced a course of three lectures on this subject in the Hall of the Company, Little Trinity-lane, on Friday, the 23rd ult. The lectures, which are to be fully illustrated by diagrams, are especially addressed to operative painters and decorators, and a very large and attentive audience, presided over by Mr. London, the Worshipful Master of the Company, assembled to hear the first lecture.

Dr. Zerffi commenced by referring to the vastness of the subject, of which, in three lectures of an hour's duration each, he should only be able to give the broad outlines. As he proceeded he should, he hoped, make it manifest to his audience that art was one of the most interesting and cultivating studies to which they could give their attention. There were two spheres in which we always moved, namely, Science and Art. Religion connected them, but Science and Art were the primary elements on which the whole of the culture and progressive development of humanity was based. Now whatever a man did, knew, or felt, came from outward impressions. He might be impressed with the beauty of an object, although he hardly knew why. To give a definition of the beautiful would be extremely difficult, just as it would be difficult to give a definition of virtue. Beauty was, indeed, but a relative expression. The beautiful was that which produced within us feelings of sympathy, delight, and admiration. Wherever there was harmony of form and idea there would be beauty. Having described the whole circle of impressions and sensations, incidentally observing that anything which excited a sense of pain was ugly, the lecturer proceeded to speak of the racial conditions as affecting art. God created mankind in three great groups,—the black, the yellow, and the white races. The black man had never created anything in art, and never would. He had only succeeded in producing, here and there, a rough sort of geometrical ornamentation, like the work of the savages. If he attempted to make a representation of a dog, it would be like anything but what it was meant to be. The Turanian or yellow race of men, of whom the Chinese were the typical representatives, were next referred to. At times in this country we had been China-mad, but China-mania was the result of fashion, which was the greatest possible enemy to real genuine art. The Chinaman, as a workman, was industrious, and possessed a great amount of talent, and in certain technical matters he was ahead of Europeans, but he had no real art in him,—he knew nothing about the beautiful. Although clever in carving or sculpture, he could not make a Venus or a Discobolus. In pictorial art he failed utterly, because he never could see any perspective. The white man, on the contrary, was apparently unlimited in his artistic capacity, for no one could say what would be the achievements of the white man in art. Those achievements would be according to his social, religious, and political organisation, and according to his better understanding of the impressions and sensations of which he became conscious. A great many people were continually talking about Nature, and advising art-students to go to Nature. But Nature was, after all, only a sort of Johnson's Dictionary to the student of art. Just as the dictionary contained all the letters and words in the language, so Nature contained all the elements which the artist needed; but he must select from them, and adapt them, and put upon them the impress of his own mind if he wished to produce a work of art. He might copy Nature until Doomsday and yet never be an artist. Nature never produced a Parthenon, and never would. No; the power of the artist was shown in his selection and combination of the alphabet afforded him by Nature. The basis of all higher culture in art-workers was history, the study of which led to a correct understanding of beauty. It was sometimes imagined that in the pre-historic or geological period there was no art; but a petrified ivory blade found at Perigord in France disproved the correctness of such a view. The blade was scratched or engraved with a few lines, depicting with considerable power an infuriated animal. It was only, however, in the Iron Age that real art could be said to properly begin. Indian art was characterised by a fundamental error, and however much the beholder might be stupefied at the grandeur of Indian works, they were never in reality beautiful at all. The imagination was not cultivated, but allowed to run wild. The Indians built big temples, and decorated them as if they were so many carved cocoa-nuts or small boxes; the decoration, in fact, was simply a kind of panelling, which, though very nice and appropriate on an ivory box, was entirely wrong when applied to a temple 150 ft. high, as was the manner in which they dressed up their columns in a kind of lace-work. The Assyrians and Persians had proved themselves to be skilful at the representation of animals in stone, although they were but poor hands at the reproduction of the human figure. On the other hand, the Chinese, who could draw flowers admirably, failed when they attempted to depict men or animals, although they would represent the fur of a cat as minutely as if they had counted every hair. Now that was not what was wanted in art. It was the idea, the expression, that was required. Landseer's dogs were unsurpassed, because every one of them as painted had a soul in him which seemed to speak to the beholder of the picture. The Assyrians and Persians had left to us some beautifully-drawn lions and other animals, one of which, a wounded lioness, was wonderfully expressive; but their men were conventional, stiff, and expressionless, all looking alike, and all, whether slaves, courtiers, soldiers, or attendants, having the same stiff features. They made the king 2 ft. or 3 ft. higher than any of the other figures, that being the only way which they could conceive of expressing the dignity of royalty. Thus the influence of autocratic and despotic government was manifested in works of art. This was especially the case with the Egyptians, whose works as they had come down to us were monumental rather than artistic. Indeed, an Egyptian temple could not be rightly described as beautiful. It might be sublime, if not awful, with its long series of heavy columns, telling the beholder much of the hieratic and despotic form of Government under which they were produced. But Egyptian art was undoubtedly the transition link between the art of the East and that of the Greeks. Now, why was it that Greek art was so pre-eminently worthy of study, as he maintained it to be? The whole secret of the Greek development in art was that it was an ideal and humane development. The Greeks made their gods and goddesses in the form of beautiful men and women because they perceived that man was the highest of the Creator's works. Their gods were ideal impersonations of different phenomenal impressions of nature. The Greeks owed all their artistic and political pre-eminence to two mighty poems,—the Iliad and the Odyssey,—which had been read by every educated man over and over again, for they were an inexhaustible

source of delight, their charm consisting in truth to humanity. Man in the time of the Greeks knew himself. The versatility of the Greeks was nowhere better seen than in the foliage of the Corinthian capital, the acanthus-leaf of which was primarily derived from a miserable plant, but which, conventionalised by the Greeks, became a beautiful piece of ornament, because impressed with an artistic idea. Greek art, of course, did not develope itself all at once, but passed through certain stages, of which the first was the Archaic, but the climax was reached in the time of Phidias, after whose time the period of decadence set in. In the transitional period between the Archaic stage of Greek art and the time of Phidias, the sculpture of the Greeks was marked by great excellence and correctness anatomically, but the muscles, veins, and sinews were too prominently shown. In Myron's Discobolus, or disc-thrower, however, the figure, although perfectly correct anatomically, did not exhibit any prominent display of the muscles, and yet the movement of the figure seemed to thrill through it right down to the toe which was partly bent upon the ground. The Greeks would have been horrified with the wasp waists too often to be seen deforming ladies' figures in the present day, for their ideal of female loveliness was embodied in the Venus of Milo, which was unsurpassed, and any one who saw it would admit it to be a perfect idealisation of womanhood. It was, indeed, a very incarnation of moral love. There were, no doubt, little mistakes about it, but with all the defects that could be found in it by exact admeasurement where was the sculptor who could produce such a work in the present day? The Laocöon and the Farnese Bull, although fine works in execution, were sensational in idea and suggestive of pain, and, therefore, contrary to every true artistic feeling. Having spoken in some detail of Roman art, the lecturer referred to taste and its gradual evolution, and the influences which retarded or stimulated it. War, religious quarrels, plague, political animosity, vulgarity, bigotry, and ignorance were no elements of art prosperity, while, on the other hand, peace, love, poetry, philosophy, history, and a diffusion of general culture produced an appreciation of the harmonious and beautiful, and were the true elements of art and science. The aim of art was to heighten men's ideas and to purify their lives, but the modern tendency to imitate Queen Anne or other patterns would not do this. Style depended upon the artist's correct knowledge of the essence of objects, as far as he could be allowed to give them corresponding visible and tangible forms. According as matter or mind, realism or idealism, predominated, so would the styles of different artists vary. In conclusion, the lecturer referred to a minute on the books of the Painters' Company, on the 10th of March, 1673, "that the painter of Joseph and Pottifer's wife and the Four Elements be fined 3*l*. 6s. 8d. for such bad work." He did not know whether such a method of dealing with bad workmen could be revived in the present day, but he was afraid that if it were revived and enforced it would bring a considerable sum of money into the Company's cash-box.

The next lecture is to be delivered this (Friday) evening, March 2nd, at eight p.m.

LEEDS ARCHITECTURAL SOCIETY.

ON Monday evening, the 19th ult., a paper was read before this society by Mr. George Bertrand Bulmer, member (also member of the Leeds Fine Art Club), on the New Town-hall, Wakefield. After strongly appealing to assistants and pupils to help the practising members of this society in supporting and maintaining the position it had taken up, Mr. Bulmer proceeded to the subject of his paper, commencing with an account of the competition for the design of the building. The planning was fully described and the construction criticised. The appearance, externally and internally, next received attention from an artistic point of view, and the interior of the leading apartments, viz., the Council-chamber, Borough Court, and Banqueting-room. The Mayor's parlour and Committee-rooms formed subjects for a series of descriptions, which were brought to a conclusion by the lecturer pointing out that the designer of the building had availed himself of modern materials and modes of construction, besides having drawn inspiration from the knowledge of the works of those who had gone before us.

BUILDERS' CLERKS' BENEVOLENT INSTITUTION.

THE sixteenth annual meeting of this Institution was held on Tuesday evening last at the Offices, 27, Farringdon-street, Mr. Howard Colls, President-elect, in the chair, and Mr. Thomas Stirling, one of the Vice-Presidents, in the vice-chair.

The annual report, read by Mr. H. J. Wheatley, the secretary, stated that the income for the past year amounted to 267*l*. 4s. 6d. in annual subscriptions, 186*l*. 3s. 6d. in donations, and 49*l*. 0s. 11d. interest on invested funds, making up a total income for the year of 502*l*. 8s. 11d., being 34*l*. 7s. 2d. less than that for the preceding year. The total expenditure was 310*l*. 11s. 10d., of which 210*l*. 16s. 8d. was paid in pensions, the remainder being for temporary relief and working expenses. During the year two elections were held. The first took place in May, when William Harffey, for many years a clerk in the service of Mr. Loat, builder, of Balham-hill, who is quite incapacitated by great age from following any employment, was elected. The second election was held in June, when Mrs. Ellen Kelly, widow of J. A. Kelly, who was employed in the office of Mr. E. Conder, of Kingsland, up to the time of his death, was elected to the widows' pension, and at the same time her daughter Ellen was elected to the Orphan Working School (per presentation of the Institution), in place of Alice Grace Spencer, whose school term expired at Midsummer last. There are now eleven pensioners on the Relief Fund, and two children are being maintained and educated in connexion with the Orphan Fund. The fourth annual dinner was held at the Guildhall Tavern on the 27th of March, Mr. Arthur C. Lucas, the President, in the chair. The total subscriptions and donations announced on the occasion amounted to 197*l*. 4s. With reference to one point connected with the Relief Fund, the Committee direct special attention to the fact that the yearly income arising from subscriptions and dividends (making together 223*l*. 4s. 7d.) is still insufficient to meet the expenditure, which last year amounted to 285*l*. 8s. 10d. This matter, the committee believe, has only to be made known to be rectified, and it is hoped that at the next annual dinner some important additions will be made to the fund. The report concluded by expressing the thanks of the committee to Mr. Arthur C. Lucas, the retiring president, for his services to the Institution during the past year.

The Chairman, in moving the adoption of the report and balance-sheet, congratulated the committee upon the economical way in which the affairs of the Institution were managed, observing that no society doing so great an amount of good could possibly do it at a less cost than was the case with this Institution, almost every penny that subscribers gave going to those whom the Institution was established to benefit. It was to be regretted that there was a slight falling off in the income for the past year; but it was to be hoped that this year there would be an improvement in that respect. As a master builder he was very glad to undertake to do what he could in making known the merits of the Builders' Clerks' Benevolent Institution. He believed that between builders and their clerks there existed the utmost good feeling and desire to be mutually helpful in this and other matters. He was glad to see that so many master builders took an interest in the welfare of that Institution, for a great deal of their success and prosperity was due to their clerks, and it was only fitting that they should seek to help an Institution carried on by the men whom it was their privilege to employ. It was gratifying that the Institution had been able to add to the amount of its funded property, but it would be additionally gratifying to see an increased number of annual subscribers.

Mr. Stirling seconded the motion, which was carried *nem. dis.*

On the motion of Mr. Stirling, seconded by Mr. W. Downs, the thanks of the Institution were accorded to Mr. A. C. Lucas for his services as president during the past year, and the following gentlemen were duly elected office-bearers during the coming year, viz.:—Mr. J. Howard Colls, president; and Messrs. Stanley G. Bird, Edward Conder, W. R. Freeman, J. M. Hart, C. T. Lucas, and H. Roberts, vice-presidents. The following members of the committee retiring by rotation were unanimously re-elected, viz.:—Messrs. F. H. Burchell, E. Graystone, H. Mason, H. Poston, J. A. Robson, H. Young, E. W. Holland, and Charles Powell. Mr. H. T. Bayes was re-elected treasurer; Messrs. S. J. Thacker, Thomas Stirling, and Thomas Bishop, auditors; and Mr. H. J. Wheatley, secretary.

Mr. E. C. Roe, in proposing a vote of thanks to the chairman, referred to the services which his father, the late Mr. Benjamin Colls, had rendered to the Institution as one of its earliest presidents.

Mr. Bayes, in seconding the motion, also referred to the indebtedness of the Institution to former presidents, making special mention of the services rendered by Mr. Benjamin Hannen.

The motion was duly carried, and acknowledged by the chairman, and it was announced that the annual dinner of the Institution would be held on Tuesday, March 13th, at the Guildhall Tavern.

THE DECORATION OF THE DOME OF ST. PAUL'S.

SIR,—Wren never had the advantage of seeing the grand mural decorations in Italy; he may, therefore, never have had any very well-defined notions touching monumental painting. We have to recollect, however, that the puritanical opposition to the introduction of pictorial embellishment into ecclesiastical edifices, which reigned in his time and down to our own day, may have hampered him, even if he had really entertained any grand project for the colour decoration of St. Paul's. But whether he had or had not any views upon this subject, there is very strong reason to believe that, practically, he had determined to imitate the panelling and the opening in the crown of the dome of the Pantheon. Moreover, we have Emmett's engraving and the iconography of Thornhill, as evidence that Wren approved of the eight dividing ribs; for though he may have permitted the first project of a panelled dome to be effaced, he sanctioned its division into eight compartments and the breaking up of its uninterrupted hemisphericity in Thornhill's pictorial project or after-thought. How, then, in the face of these facts, can painters and architects who profess to respect Wren's views, deliberately set themselves to run counter to them? We have unimpeachable evidence that Wren did not consider, great geometer that he was, that that "unbroken hemisphericity of the dome," of late so much insisted on, was worth preserving. In addition to this we have the dome of the Pantheon deeply recessed with panels, and with the opening in its crown to show that the Roman architects had no respect for that bald, unbroken hemisphericity. Besides, any one acquainted with the first principles of æsthetics should know that the sphere is not an elemental form of beauty. It was a feature neither of the pure Classic nor of the pure Gothic. Circular curves were never lines of beauty. They are essentially mechanical curves, not the lines of living movement and of growth. So that as a principle of decorative art, that "unbroken hemisphericity" is scattered to the winds. But the proposal to utilise the dome of St. Paul's for the pictorial presentment of the vault of heaven is an insult to common sense. Imagine the spectator's eyes passing from its contemplation through the crowning aperture to note mundane windows and the more material construction in the vicinity of the ball and cross! Wren, though an architect, was a scientific and a consistent man, and could never have permitted such a solecism in the language of design to be perpetrated. Wren and Thornhill were intimates and colleagues, so that we may be sure that what was done by Thornhill must have been done with the full knowledge and sanction of Sir Christopher, who, though he would never have permitted any exhibition of that Correggiosity,—which ultimately led to the "sprawling saints of Verrio and Laguerre,"—in the dome of St. Paul's, did approve of Thornhill's project of decoration designed on principles similar to the great Italian mural works. Thornhill's design is, in my opinion, the best that could possibly be devised for the decoration of the dome. But Thornhill's design, though in general conception excellent, would be improved by better art, by the introduction of colour into the figure compositions, as was originally proposed, and of gold in the background within the spandrels.

Stevens had not sufficient practical experience in mural decoration to encounter the project. His design is altogether too weak and thin for the purpose, and his circular plaques will not only be found to be too small, but out of place.

A PAINTER.

St. James's Hall Front.—The stone-work, we are told, was executed by Messrs. Moslin, of Chelsea, not by Messrs. Mowlem, of Chelsea, as stated.—The scagliola balustrade to grand staircase was executed by Messrs. Bellman & Ivey, of Wigmore-street.

EARLY RECOLLECTIONS OF WESTMINSTER HALL AND THE LAW COURTS.*

AT the suggestion of a friend I have been induced to jot down roughly the following recollections of the interior of Westminster Hall as it presented itself to my eyes in the early part of the present century; also of the old Law Courts at Westminster, now so rapidly disappearing from sight, and so soon to be forgotten.

In 1818 the Courts of King's Bench and Chancery were held in a "cancellated" wooden erection at the south end of the interior of the Hall of Richard II., which occupied the whole width and about one-half the depth of the sixth bay from buttress to buttress, and then the last bay. This fact is noted because Sir Charles Barry lengthened the hall another bay southwards to make a grand entrance-hall to St. Stephen's Chapel.† These structures rose to about the springing line of the great window, and consisted of two large courts, having raised floors, with a central and wide ascent of steps to these floors right and left, and a higher ascent southward through a doorway under the great window, to connect the hall with the rooms of the Houses of Lords and Commons. For additional access to these two courts there were two passages next the walls, one of which, that on the north side, was also a way out into Old Palace Yard. The building presented a pseudo-Gothic front, answering to what is now called the "Batty Langley style," 1700, and had two semi-octagon fronts, each with three windows and two stories, and in the middle between them an arched doorway. Taken altogether, it was by no means bad of its kind. I well remember its demolition, and myself helped to remove the massive flight of steps which remained *in situ* till the preparations began for using the Hall for the banquet and ceremonies of King George IV.'s coronation.

The Lord Chancellor's Equity Court and the Courts of Exchequer and Common Pleas and Rolls were on the western side of the Hall, and were approached from the inside of the Hall by two or three ancient openings. The Hall was surrounded on three sides by buildings attached thereto.‡ Against the east wall were the Speaker's residence and a long range of rooms, —offices of the tellers and auditors of the Exchequer,—and the whole south side of New Palace Yard consisted of low Elizabethan and later buildings, which were taverns and official dwellings. At the western end of these latter remained a large room, called Queen Elizabeth's Chamber, which, if I rightly remember, had become the Exchequer Coffee-house; it was removed in about 1822 to the western end of the terrace of New Palace Yard, and there became (Mrs. Fendall's) New Exchequer Coffee-house.

Beyond Queen Elizabeth's Chamber southward, and on the east side of St. Margaret-street, there had probably been erected, about 1780,§ by Sir William Chambers, the Architect of the Board of Works, who also designed Somerset House, a handsome front of official buildings, the King's Bench Record Office, which presented a western façade of three bays of five windows each; and at the extreme southern end was a square corner tower with western and southern windows, from which there was a flank building of the same Italian architecture, having five windows, and reaching to the ancient front of the Houses of Parliament, thus forming the eastern side of Old Palace Yard.‖ The great fire of 1834 led to the immediate demolition of this square tower and the flank building. I believe that there had been a reserved intention to make a similar square tower at the northern end of this façade, with a flank building between it and the northern front of the Hall, so modernising the south side of New Palace Yard after the removal of the Elizabethan buildings.

In 1819 and 1820 the north front of Westminster Hall was cleared of some of its mean and incongruous attachments, and it underwent a good restoration by Gayfere, who was then approaching the end of his restoration of King Henry VII.'s Chapel.* Afterwards, under Sir Robert Smirke, large repairs of the roof of the Hall, the refacing of the internal walls, the formation of a new floor, the removal of the old Courts of King's Bench and Chancery, and the reparation of the then south window, together with other works, inclusive of new windows in the roof, were undertaken. For these purposes the Hall was closed during the suspense of the coronation of George IV.† At the same time the old buildings about Queen Elizabeth's Chamber were removed, and the stone building at the south-west corner of New Palace-yard was erected under the influence, it is thought, of Mr. Hanbury Tracy (Lord Sudeley), M.P., which ignored the first intention of imitating the Italian style southward, and made it to agree pretty nearly with the Gothic style of the Hall front.

There now appeared on the scene Mr. (afterwards Sir John) Soane.‡ He was required to design new law courts, the area assigned for the purpose being from the back of the Italian buildings of the King's Bench Record Office, on the east side of St. Margaret's-street, to the west wall of the hall, and the whole length of that wall, comprising a space wholly internal, about 240 ft. long, and 60 ft. wide. Mr. Soane commenced operations by making a corridor about 9 ft. wide next the wall of the hall, with seven doorways in that wall. To this corridor he attached, most ingeniously, eight courts on the ground-floor, and over them others, with various rooms. The large buttresses on that side of the hall, of which there were six, perhaps seven, sadly obstructed the architect. Some of them he seems to have retained in bulk, and to have built in as walls, and others to have greatly reduced; but it is hoped that the foundations of all are *in situ*, and that some of the lower parts of them are still capable of being developed,—that, in fact, there may be sufficient of them left and on record to warrant an entire restoration. The buttresses on the east side of the hall were more irregularly placed, but there were yet remains of three, one in the Speaker's Court, and two in the Cloister, all which have since disappeared.§ The destruction of others was occasioned by the palatial and ecclesiastical buildings which followed William Rufus's building; for Sir Robert and Sir Sydney Smirke have most convincingly proved that the walls belong to that king, having traced the positions of all his great windows and of several small intermediate ones besides. The remains of these windows have been left undisturbed, though necessarily covered with modern casing.‖ These works occupied from 1822 to 1825.

The difficulty which Sir John Soane had to overcome ¶ in respect of light, ventilation, and access to the courts and their belongings, was a theme of remark and of admiration at the conclusion of the works. Comparing the small area at his disposal, and the great amount of legal business carried on there, with the immense area and bulk of the Royal Courts of Justice just completed, every one will accord to the architect of the Law Courts of George IV.'s reign the meed of praise so justly deserved.

As already stated, Sir Robert and Sir Sydney Smirke have clearly proved that the walls of William Rufus's Hall still remain in bulk on each side. Like a corresponding building of the same date, erected at Rouen by his elder brother, Robert, Duke of Normandy, it had pillars to uphold the roof; therefore, massive buttresses with arched flyers were not necessary in either. This Palace Hall of Duke Robert was in the next century replaced by the covered market "Halles" which yet remain there, in almost the original state, with a double row of pillars supporting a floor, and therefrom rise pillars of timber to carry the roof; flying buttresses are therefore absent.

When Richard II. became possesor of the Hall of Rufus, he desired to secure amplitude as well as freedom from pillars, and therefore he got rid of the ancient pillars and roof of William Rufus and whatever else the pillars may have supported. He then spanned the hall with the beautiful hammer-beam truss principals which yet remain; and, foreseeing the thrust that would be made on the walls, he devised, in order to resist that thrust, ten massive flying buttresses, seven of which still exist, to a great extent, on the southern side of the Hall.

If we refer to the beautiful engraving in Brayley & Britton's work, plate viii., No. 41, the existence of both designs becomes manifest. The plain and flat Norman buttress, or, rather, pilaster, is shown in elevation on the wall of the Hall in the Speaker's Court; and in the plan of the west wall, in plate ii., No. 1, there are ten such flat buttresses. The grand detached buttress, with its flyer, which existed before the fire of 1834, is evidently of the style of Richard II.'s period, and will be followed, it is to be hoped, in the restoration on the west side.

In connexion with the view of King Richard II.'s buttress, in Brayley & Britton's "Ancient Palace of Westminster," plate ix., we may observe the unaltered back of the two houses, which, about 1745, were occupied by "the Receipt of Exchequer," and in 1835 by Mr. Rickman and Mr. Godwin, Clerks of the Parliament.

These houses were probably connected with the Star Chamber, the exact position of which can now be conjectured only. The various views, of different dates, show how their north front had been gradually modernised, but that the back, on the south, had up to a late date retained, not only the iron grilles to the seven windows (rendered necessary for State purposes when the Star Chamber was in full force), but also traces of small openings, arches, a buttress, and a fine arched gateway. Of all these interesting features the history is probably lost beyond recovery.

In one of the last volumes of "Archæologia," Mr. G. R. Corner has contributed four beautiful illuminated pictures, attributable, he thinks, to the period of King Henry VI. They represent, quaintly and vividly, the assemblies in the four courts of law,—Chancery, King's Bench, Common Pleas, and Exchequer. Every one interested in English judicial history should see these interesting pictures, and read Mr. Corner's descriptions.

HENRY POOLE.

Westminster.

* From *Notes and Queries*.

† I picked up some years ago an excellent early aquatinta engraving of the interior of Westminster Hall, and have inserted it next the view of the south side of New Palace-yard in my copy of Smith's "Westminster," p. 30.

‡ See plans of the Palace in Smith's "Westminster," pp. 38 and 125, and in Brayley & Britton, p. 464.

§ Brayley & Britton's "Westminster Palace," p. 401; Smith's foundation plan, 1807, p. 125.

‖ The upper room of the square tower was the kitchen of Bellamy, the housekeeper and provisor; committee-rooms and passages occupied the other parts of this flank building.

* Brayley & Britton's "Ancient Palace of Westminster," p. 440.

† Smith's "Westminster," p. 30, plate of south side of New Palace-yard, 1805.

‡ Brayley & Britton, p. 406.

§ *Ibid.*, plates ii., xvii., and ix.

‖ Brayley & Britton, pl. viii.

¶ *Ibid.*, p. 442.

THE SANITARY ASSURANCE ASSOCIATION.

THE second annual meeting of the Sanitary Assurance Association was held at the Office, 5, Argyll-place, Regent-street, on February 22. Professor T. Hayter Lewis, F.R.I.B.A., was elected to preside. The secretary read the report of the Council for the year 1882, from which it appeared that the inspection of houses, supervision of work, and issue of certificates, had been continued on the plan initiated by the Association in 1881. The property placed on the assurance register and inspected during the year had varied in annual rateable value from 10*l.* to 1,000*l.*, and in every case the sanitary arrangements had been found to be defective. The Chairman, in moving the adoption of the report, referred to the work done by the Association during the past year, and pointed out that the officers of the Association had inspected a much greater number of houses than in the preceding year, still he was of opinion that when the benefits to be derived from such operations were considered the progress ought for the future to be still more rapid. Great good had, however, been done, and he believed that there was ample promise of further good in the same direction.

The Construction of Window Frames. The Rev. D. Quayle, of Castletown, Isle of Man, has just obtained a provisional protection order for an improvement in the manufacture of window-frames. It consists of light steel tubes being attached to the bottom part of the frames, and thence passing through the sill of the window for a short distance, so that when the window is opened, the tubes or rods being raised with it, a protection at once exists against children or servants falling out of the window, or against burglars being able to enter. All unsightly fixed bars are obviated, and the window can be raised any height for ventilation with security.

THE BUILDING OF FACTORY CHIMNEYS.

IN the course of a lecture on factory-building recently given by Professor Koch before the Austrian Architects' and Engineers' Association, the above subject was treated at some length. From both æsthetic and technical grounds the most suitable shape is considered by him to be a round conical form. This mode of construction reduces to a minimum the surface which is affected by the wind, and can usually be executed so as to present a more pleasing effect than that of a quadrangular or polygonal construction. As to the ornamental features of chimneys, it is remarked that the cannons of the last century form, in a certain degree, suitable models for the upper portions of chimneys, which can be easily and effectively reproduced in brickwork. Reference is also made to the deceptive effect of chimneys in plans, which, when executed, usually appear larger in proportion to the surrounding objects than they do on paper. This fact is attributed by Professor Koch to the absence of any shadow until the eye of a person standing at the foot reaches the summit, the effect of the upper projections being intensified by the absence of any other shadow in the work.

Several comparative dimensions are quoted in the accounts published of the lecture in question, which, however, are qualified with reservations as to their application.

The height of the pedestal may, it is remarked, be fixed at from one-fifth to one-quarter of the entire height of the chimney. The diminution of size of the chimneys should be for average diameters about 2 in. per running mètre (39⅜ in.).

With regard to stability, it is stated that the excellent quality of the bricks made in Vienna would enable builders to be a little more venturesome in this respect, were it not that the violence of the storms in that part of Austria necessitated special precautions. According to official regulations, a pressure of wind equal to about 30⅛ lb. per square foot is laid down as a basis. Stress is laid upon the necessity of the foundations being executed in a substantial and exact manner, as a slight unevenness in the foundations would cause the chimney to be out of level. It is also recommended for the smoke-channel to be conducted into the chimney at as high a point as is conveniently practicable, and well above the foundation. The reason for this precaution is said to be that the smoke exercises in many instances a desiccating influence upon the brickwork on the side where it is conveyed into the chimney. This circumstance, it is asserted, is capable of producing a sinking of the brickwork after a certain lapse of time.

In addition to suggestions as to lightning-conductors, &c., the remark is made that the cost of chimney-building in Vienna, with an internal open diameter of about 39 in., is about 5*l*. per running yard. The work at the summit of the chimney would be a subject of separate calculation, and the brickwork of the pedestal, &c., would be reckoned according to its cubic measurement.

MORTAR FOR FIRE-PROOF WALLS.

IN a recent number of *Stahl und Eisen* Herr Lürmann called attention to the unsuitable character of the mortar commonly used in the construction of walls built of fire-bricks. He remarks that such walls are often subjected to pressure from above, and are likewise constantly undergoing physical and chemical changes from the action of the heat to which they are exposed, and from the effects of the substances which are being burnt. He refers to the fact that the masonry is sometimes more or less disconnected, even before the construction which it forms is really in active use.

In order that fireproof walls may acquire the needful firmness to resist the effects of furnaces, &c., being heated and put into operation, the use of so-called fire-proof mortar is disapproved by Herr Lürmann, who suggests the employment of a mortar composed of lime, dolomite, cement, blast-furnace slag, glass, &c., with the addition of sand, clay, fire-brick dust, &c. This mortar in a finely-grained condition is mixed with water in such a way that the spaces between the bricks can be very small. It is asserted that this mortar ensures uniformity of extension during the action of heat, the masonry forming a solid mass and the loosening of bricks being entirely obviated, as well as the falling of mortar from the spaces between the bricks.

The result of a high temperature is to render the union more binding between the mortar and the fire-bricks. Herr Lürmann remarks, however, that the fire-bricks must not in such cases exceed the normal dimensions, as bricks of too large a size are not well burned through, and by their want of uniformity allow of displacements in the interior of the masonry. The evenness in surface of fire-bricks of good quality makes the quantity of mortar but small in proportion to the entire mass of brickwork, the fire-resisting properties of which are not deteriorated, Herr Lürmann asserts, by the substitution of the mortar proposed by him for that commonly in use.

SALE OF PROPERTY AT THE AUCTION MART.

VALUE OF CITY FREEHOLDS.

ON Thursday and Friday in last week Messrs. Farebrother, Ellis, Clark, & Co., held a large and important sale of city and other property, at the Auction Mart. The property consisted of a portion of the London estate of the late Mr. Joseph Arden, and was sold under an order of the Court of Chancery in the case of Arden *v.* Arden. The sale, which was divided into twenty-six lots, comprised freehold and copyhold properties in Warwick-court, Holborn; Red Lion-square, Hatton-garden and Hatton-wall, Gloucester-street, Bloomsbury; Stanhope-street, Clare Market; St. John-street, West Smithfield; Wood-street and Gresham-street in the City; Goswell-road; Curtain-road, Shoreditch; High-street, Homerton; Upper-street, Islington; Holloway-road and Esssex-road, and Wapping and Bethnal Green. The aggregate rental of the property was stated to be 2,259*l*. per annum.

Sir John Whittaker Ellis, who conducted the sale, observed, in submitting the property, that it was left to the late Mr. Arden by his father, who had enjoyed it for about sixty years. The property was let at very inadequate rentals, and he drew attention to the fact that the rents had never been raised during the last forty years, although it was well known that almost every kind of property in the metropolis had more than doubled and trebled in value during that period. It would now pass into other hands, and would be sold, subject to a reasonable valuation which had been made by direction of the trustees under the will. The first portion of the property offered (in three lots) consisted of an undivided moiety of three freehold houses in Warwick-court, Holborn, the rental of which was stated at 310*l*. per annum. In submitting this property the auctioneer said it was worth more than double the present rental. It was sold for 3,200*l*. An undivided moiety of the freehold premises in Warwick-court, known as the Gray's Inn Larder, and let on lease expiring in 1866, at 157*l*. 16s. per annum, was sold for 2,270*l*. Two freehold houses in Red Lion-square, Holborn, altogether, with land adjoining, containing an area of 4,420 ft., and let on a yearly tenancy at 210*l*. per annum, were sold for 4,160*l*. Two freehold houses in Hatton-wall and Hatton-garden, let to yearly tenants at 85*l*. per annum, realised 2,110*l*. Four freehold houses in Gloucester-street, Bloomsbury, let to yearly tenants at a rental of 156*l*. per annum, were sold for 3,340*l*. Freehold business premises, in Stanhope-street, Clare Market, let to Mr. Spiller, builder, who, it was stated, was holding over under the terms of an agreement for a lease which expired at Michaelmas, 1880, at a rental of 38*l*. per annum, were sold for 1,050*l*. Three freehold shops and dwelling-houses, in St. John-street, West Smithfield, concluded the day's sale. Two of these shops and dwelling-houses are held on leases which expired in 1880, and on similar conditions as to a new lease as the before-named premises in Clare Market, at 80*l*. per annum. The other premises are held on a lease expiring in 1885, at 50*l*. per annum. The three properties realised 3,285*l*. The total proceeds of the day's sale amounted to 19,415*l*.

The second day's proceedings commenced with the sale of the City property, the auctioneer observing that it consisted of some of the best property in the City, which, from his own knowledge, was let at very inadequate rents. The first lot offered during the day comprised the freehold property in Wood-street, a short distance from Gresham-street, substantially built, having a frontage of 15 ft., and containing a total area of 550 superficial feet, let on a lease expiring in 1890, at a rent of 210*l*. per annum. After a spirited competition the property was sold for 6,110*l*. The freehold premises in Gresham-street, at the corner of Aldermanbury, were next submitted. They were described as having a frontage to Gresham-street of 23 ft., with a return frontage to Aldermanbury of 40 ft., and containing an area of 879 ft. They are let on lease expiring in 1888, at a rental of 420*l*. per annum. The first offer was 8,000*l*., upon which an advance of 1,000*l*. was immediately made, and ultimately the hammer fell at 11,200*l*., at which sum the property was sold. A freehold property in Goswell-road, containing an area of 2,330 ft., and occupied as a wall-paper manufactory, was next offered. It is let on a lease expiring in 1884, at 157*l*. per annum. For this lot there was a close and severe competition, and it was sold for 7,300*l*. Freehold premises in Curtain-road, Shoreditch, containing 2,220 ft., and let on a lease expiring in 1890, at 80*l*. per annum, were sold for 2,610*l*. A freehold estate in High-street and Plough-lane, Homerton, containing an area of 9,380 ft., containing three shops, houses, and warehouses, and let on lease expiring in 1888, at 86*l*. per annum, was sold for 2,170*l*. Two freehold houses and shops in Holloway-road, let on a long lease at a rent of 100*l*. per annum, realised 2,140*l*. A freehold house and shop in Bethnal-green, let on lease at a rent of 27*l*. per annum, was sold for 600*l*.; and similar premises in Wapping, rented at 23*l*. per annum, realised 410*l*. The sale was brought to a close with the disposal of two lots of copyhold property in Upper-street, Islington, comprising four houses and an aggregate area of 7,500 ft. The first lot is let on leases just expiring, at a rental of 220*l*. per annum. The second lot is in hand. They were sold for 6,240*l*.

THE NEW BUILDINGS ON THE WHITEFRIARS PRIORY SITE.

WITHIN the last few days the demolition has been completed of the several old buildings which have had to be removed in order to clear the site for the extensive new block of mercantile structures which are about to be erected between Bouverie-street and Whitefriars-street, on the ground where, until within the last few weeks, stood the old coaching house, the Bolt-in-Tun Inn, and the Sussex Hotel, and previously, in the early and middle ages, the historical Priory of Whitefriars, a descriptive notice of which appeared in the *Builder* a few weeks since. The buildings forming the Sussex Hotel and Bolt-in-Tun were cleared away some weeks since, and the foundations of the intended new structure have already been for some time in progress. The premises in Bouverie-street to the north of the Sussex Hotel, in the direction of Fleet-street, which were also required for the new buildings, were finally cleared away last week, and the entire site is ready for the prosecution of the works, which are now actively in progress. The removal of the Bouverie-street buildings displaces many old and well-known City firms connected with the publishing and printing trades, amongst others Messrs. Murby, publishers; and Messrs. Deane & Co. and Messrs. Dunn & Co., both firms being printing-ink manufacturers. All these several firms have had for the present to migrate to other localities, but it is understood that they will return on the completion of the new buildings. The principal elevation of the new structure will be in Bouverie-street, to which it will have a frontage of 136 ft. in length. In depth it will be carried eastwards to Whitefriars-street, with an entrance from that thoroughfare of about 30 ft. in width, connecting the two streets by a roadway or avenue. The building will cover a ground area of about 14,000 superficial feet, and will be carried to a height of upwards of 60 ft., comprising several lofty floors, besides a deep basement. The new buildings are to be erected as printing-offices and warehouses.

Messrs. Arding, Bond, & Buzzard, of Surrey-street, Strand, are the architects; and Messrs. Perry & Co., of the Tredegar Works, Bow, the contractors.

New Workhouse for Wandsworth and Clapham.—The guardians of the Wandsworth and Clapham Union have decided upon the erection of a new workhouse, the estimated cost of which is between 50,000*l*. and 60,000*l*.

THE INNER CIRCLE COMPLETION RAILWAY AND THE DEMOLITION OF CITY PROPERTY.

ALONG the line of route of the Inner Circle Completion Railway, between the Mansion House Station of the Metropolitan District line and the Cannon-street Station of the South Eastern Company, and again between Little and Great Tower streets, the demolition of much valuable property for the construction of the underground completion line is just now going forward at an exceedingly rapid rate, and Messrs. Horne, Eversfield, & Co. are now, in quick succession, selling the materials of the several buildings required to be taken down. Last week they disposed of the materials of a number of buildings on the north side of Great Tower-street, extending from the Old Ship Inn, at the east end of Little Tower-street, to Mark-lane, and large numbers of workmen are now engaged in the work of dismantling these several structures, many of which are modern and well-built mercantile premises. On Monday last the same auctioneers effected another sale of the materials of the buildings in Mark-lane-square, including the extensive premises of Messrs. Barrett & Co., steam printers, which have only just been erected. The materials at these several sales commanded more than average prices, owing to the buildings being in such a substantial condition.

The portions of the line now being actively prosecuted are between the Mansion House Station and Cannon-street at the west end, and between the Tower Hill Station and Great Tower-street on the east, and it is stated that at these points about 1,000 workmen are at present employed, working by gas-light. From Thomas Apostle-lane, in the direction of College-hill, the tunnel arches are already turned, and the connexion of the line with the Mansion House Station platforms is in progress, whilst eastward the line is being constructed under Cloak-lane, in the direction of Dowgate-hill and Cannon-street. Amongst the buildings in course of demolition for the purposes of the railway are several ancient and historical structures, one of these being the Cutlers' Hall, in Cloak-lane, extending southwards along College-lane to the ancient house in which Whittington is said to have resided for a great number of years. In a few days Cutlers' Hall will have entirely disappeared, as also the north side of Whittington's house, which is likewise being swept away. From Dowgate-hill, at its junction with Cannon-street, immediately opposite the station, to the junction of Cannon-street and King William-street, the works are being vigorously carried forward. There are three shafts in Cannon-street, one opposite the station, another a short distance eastward of St. Stephen's Church, London-stone, in front of which there is a hoarding, whilst the foundations of the church are being underpinned. The third shaft is at the east end of Cannon-street, at its junction with King William-street. Preparations have just been made for carrying the line across King William-street, and under King William's statue, in the direction of Fish-street-hill and Eastcheap, and within the last few days the statue and pedestal have been enclosed by a hoarding for the purpose of sinking a shaft and commencing operations. The Weigh-house Chapel and some property immediately around will shortly be taken possession of, the companies having given notice that they shall require it at the end of March. That portion of the line running eastward along Eastcheap to Great Tower-street is the only section on which the works have not yet been commenced, but these will shortly be entered upon, and included amongst the property to be taken down is the Butchers' Hall, on the south-west side of Eastcheap. In anticipation of the speedy demolition of their hall, the Butchers' Company are said to have held their last dinner there during the present week. The removal of this building will not be regretted, as it is a plain and unattractive structure. Incidentally it may here be observed that the original hall was destroyed during the Great Fire in 1666. In 1668 it was re-erected, and in the year 1829 this second hall was also destroyed by fire. In the same year the erection of the present hall was commenced and completed in 1831. It is thus a little more than half a century old. The works at the east end of the line, between the Tower-hill Station and Great Tower-street, are being carried forward with the same activity as those at the west end. The line from the Tower-hill Station to a point near Great Tower-street is already completed, and that part which passes under the north side of the Church of All Hallows, Barking, is in a forward state.

THE VICTORIA BUILDINGS, MANCHESTER.

MESSRS. ROBERT NEILL & SONS' tender for the completion of the buildings on the Victoria site has been accepted by the Manchester Corporation, and the works in connexion with the superstructure are now being proceeded with. The designs have been prepared by Mr. William Dawes, architect, Manchester; and are being carried out under his superintendence. Externally the new portions will harmonise with the existing buildings, which were commenced in 1875, and will complete this important block in accordance,—broadly,—with Mr. Dawes's original intention, although not quite so rich in ornamental detail as at first proposed. The foundations of the new building are very extensive.

BUILDING PATENT RECORD.*

APPLICATIONS FOR LETTERS PATENT.

889. T. Fletcher, Warrington. Cooking-stoves. Feb. 17, 1883.

893. J. C. Mewburn, London. Stoves for burning bituminous fuels. (Com. by L. C. Voorhees, New York, U.S.A.) Feb. 17, 1883.

900. W. Carrington, Openshaw, and W. H. Bowers, Gorton. Water-heater for pipes for warming greenhouses, &c. Feb. 19, 1883.

904. B. C. Cross, Leeds. Waste-preventing cisterns. Feb. 19, 1883.

905. T. Dunbar, Coalbrookdale. Fire-grates. Feb. 19, 1883.

909. J. C. Bloomfield, Blen-y-lung, and J. McGwm, Bally-Magharan. Manufacture of bricks, tiles, &c. Feb. 19, 1883.

919. F. G. Fleury. Water-waste preventers. Feb. 20, 1883.

920. H. W. Davidson and J. Spiers, London. Assisting the combustion of fuel in grates, &c. Feb. 20, 1883.

923. T. J. Mullings, London. Sash-fasteners. Feb. 20, 1883.

933. W. Lee and D. F. Beale, Maidstone. Construction of blocks, &c., for walls and building structures. Feb. 20, 1883.

939. E. Edwards, London. Manufacturing bricks, tiles, &c. (Com. by P. A. Lazarae, Peruget, France.) Feb. 20, 1883.

971. T. H. Collins, Winchester. Window-fasteners. Feb. 22, 1883.

NOTICES TO PROCEED

have been given by the following applicants on the dates named:—

Feb. 20, 1883.

4,894. J. Wadsworth, Manchester. Apparatus for heating, cooking, and ventilating, &c. Oct. 14, 1882.

5,106. W. H. Lindsaw, London. Window-sashes. Oct. 26, 1882.

5,115. T. H. Collins, Winchester. Manhole doors for passages leading down to sewers, &c. Oct. 27, 1882.

516. W. R. Lake, London. Building arches and domes. (Com. by T. J. Lovegrove, Philadelphia, U.S.A.) Jan. 30, 1882.

ABRIDGMENTS OF SPECIFICATIONS.

Published during the Week ending February 24, 1883.

2,961. J. Harsant, London. Apparatus for flushing water-closet traps and urinals. June 22, 1882. Price 6d.

A displacer is pivoted above the tank, which, when pulled down into the water, starts the syphonic action which empties the tank. The syphon consists of a pipe rising up above the level of the water, which is covered by a cap which forms the short leg. This cap may be attached to a lever of the displacer and be lifted by the same. An air-pipe is attached to the cap to admit air thereto when the flush is nearly finished, and gradually diminishes the rush of water. The water passes into a chamber below the tank, from which it passes to the closet by a pipe of a smaller diameter, with a trumpet-shaped mouth, so that when the flush is finished some water is left in the chamber, which passes down the pipe through holes in the sides of the mouth, and forms an after-flush.

3,049. R. Searle, London. Manufacture o artificial stone. June 28, 1882. Price 4d.

The stone is formed by Portland cement mixed with heated water without lime.

3,095. H. Conolly and A. E. Hubert, London. Overflow of valve-closets. June 30, 1882. Price 6d.

The overflow-pipe opens into the basin at the bottom thereof, and rises outside the basin to the height at which the water is to stand in the same. It is then bent over and carried down to the discharge pipe of the closet. The overflow is thus always sealed.

3,103. W. A. M. Valon, Ramsgate. Bricks and tiles. July 1, 1882. Price 4d.

These are rabbeted on all their faces, so that when placed together they are gas and air tight.

* Compiled by Hart & Co., Patent Agents, 186, Fleet-street.

COMPENSATION CASE.

INNER CIRCLE COMPLETION RAILWAY.

THE compensation case of Gooch *v.* The Metropolitan and Metropolitan District Companies, was tried before Sir Thomas Chambers and a special jury at the Guildhall on Saturday, the 17th ult.

The claimant had carried on the business of a stationer in the premises now required, being No. 55, King William-street, London Bridge, for nearly half a century, and at the present time had thirteen years' unexpired term to run of a recently-granted lease of the whole house at 300*l.* per annum, the upper portion of which he let off at 250*l.* a year for the full period, retaining in his own occupation the ground-floor, shop, and basement.

Mr. Edward F. B. Fuller (Fuller & Fuller, of Queen-street), in giving evidence as to the value of the premises, stated that he had been acquainted with the property all his life, having been born at No. 53, King William-street, and that he had many dealings with houses in the various streets adjoining thereto. The premises in question the witness estimated to be worth 700*l.* per annum, or an improved rental of 400*l.* a year, which he valued at 3,500*l.*, beyond which the claimant ought to be paid 196*l.* for fixtures, 99*l.* for fixed plant, and 57*l.* for erecting and fixing movable plant, and though he was entitled to be paid a further sum for loss on forced sale of stock, the witness was bound to admit that the claimant could not seek compensation for loss of business, as the improved rental swallowed up all the remaining net trade profits.

Mr. Chatfeild Clarke, the surveyor to the Fishmongers' Company, agreed with Mr. Fuller's value of the premises, as he estimated the ground-floor and basement at 500*l.* per annum, less 50*l.* for taxes.

Mr. Edmund Farmer (Debenham, Tewson, & Co.), on behalf of the Railway company, valued the whole premises at an improved rental of 100*l.* per annum only, giving 973*l.* as the outside value of the lease, including compulsory sale.

Mr. R. C. Driver said he had advised the owner of the property, as recently as 1879, to grant a new lease of the whole premises at 300*l.* per annum. Mr. Gooch, as an old tenant, did perhaps get the house at a somewhat moderate rental, though the full value now was 400*l.* a year, not 700*l.*, and that he agreed with Mr. Farmer's value of the unexpired term.

Mr. Robert Ritchie, the company's surveyor, said he had purchased the premises in question as well as four other houses in the same street, on the basis of 400*l.* per annum rental value, and that he considered them worth no more.

In addressing the jury, Mr. Bidder, Q.C., contended on the part of the companies, that between 1,200*l.* and 1,300*l.* was the full compensation the claimant should receive, as he could easily remove the stock and sell it elsewhere; whereas Mr. Edward Clarke, Q.C., M.P., suggested that the claimant ought to be paid the value of his lease as estimated by Mr. Fuller and the other witnesses, together with the items agreed for fixtures, besides a substantial sum for forced sale of stock, &c., and though he could not support any claim for loss of business without reducing the value of the leasehold interest; he thought Mr. Gooch should receive in all about 4,700*l.*; and the jury without leaving the box returned a verdict for 3,600*l.*

Prizes offered by the Society of Arts.—Among the prizes offered by the Council for the year 1883 are:—

John Stock Prize.—A Society's Gold Medal, or 20*l.*, for the best design from a poem, or from history, or from the Scriptures, prepared with a view to mural decoration.

Fothergill Prize.—A Society's Gold Medal, or 20*l.*, is offered for the best invention having for its object the Prevention or Extinction of Fires in Theatres, or other places of public amusement.

Mulready Prize.—A Society's Gold Medal "To that student in a School of Art in the United Kingdom who exhibits the best drawing from the nude figure, executed in black and red chalk, in the manner so successfully practised by Mulready."

BRITISH ARCHÆOLOGICAL ASSOCIATION.

ON Wednesday, the 21st ult., the sixth meeting of the present session was held, the Rev. S. M. Mayhew in the chair. Mr. G. R. Wright, F.S.A., announced the invitation from the Mayor of Dover to hold the annual congress in that town. The invitation had been accepted. Visits will be paid to Hythe, Folkestone, Lympne, and other places of interest in the locality; and two days will be spent at Canterbury in celebration of the fortieth anniversary of the Association, the first congress having been held there in 1844. Mr. Loftus Brock, F.S.A., in illustration of one of the papers, exhibited a contemporary drawing of Winchester Palace, Southwark, showing its ruins after the fire; also a Roman cinerary urn found in King-street by the late Mr. George Gwilt in 1819. Mr. Cecil Brent, F.S.A., described an Indian stiletto-scissors of very peculiar form. The Chairman exhibited a fine collection of antiquities, principally from excavations in London, the most important being a Roman jet ring, with a cross and palm-leaves, of Christian origin, found in the Minories; also a Roman axe-head, similar to those carried by lictors, from Leadenhall; and a fire-arrow, with arms below the dart for holding in the combustibles. Mr. Martin exhibited some Roman pottery found in Holborn, one being similar to the olive or honey pots used in Spain to the present day. A paper was then read on "Roman Southwark," written by Dr. Rendle. The author described the district, now so densely populated, as having been originally a huge marsh, on the borders of which "lake dwellings" may have existed, their pile foundations being not unfrequently met with. The embankments which have reclaimed so large a tract of country were undoubtedly Roman in their origin; and, judging by the number of early coins found, this work must have been done soon after the arrival of that people. Roman remains, traces of handsome villas, mosaic pavements, and burial-places, have been found throughout Southwark, particularly along the probable lines of the roads. The paper was illustrated by Mr. Gwilt's map of Southwark, on which that distinguished antiquary had marked the position of all the finds noted by him. The proceedings were brought to a close by a discussion on the interesting paper on "Sign-boards in St. Paul's Churchyard," by Mr. Syer Cuming, F.S.A. (Scot.), read at the previous meeting.

WHAT IS A NEW STREET?

AT the Hammersmith Police Court, the Fulham Board of Works summoned the London and North-Western Railway Company, to recover the sum of 840*l.* 1s., which had been apportioned upon them for making up a portion of Scrubb-lane, which was declared to be a new street. Mr. Page represented the Company, and said it was not a new street. Mr. T. E. Jones, Clerk of the Board, was called to prove the formal proceedings. He said that he was acquainted with Scrubb-lane before the year 1856, at which time there was only one building in that portion of it. There were now forty-two houses on the west side, and twelve on the east. He also stated that building was still going on in that portion of the lane. The length of that part for which proceedings were taken was 1,635 yards. It did not extend so far as Wormholt Scrubbs. Mr. Besley, in explaining the plan, said if there ever was a case in which the public advantage would be subservient to that of the owners of the land, it was this one. In the event of the road being made up, it would lead to the letting of the land and covering it with houses. Mr. Sheil looked at the plan, and thought, from the way in which the houses were dotted about without any regularity, it was not a new street at present. He dismissed the summons, and ordered the Board to pay 6*l.* 6s. costs.

LIGHT AND AIR CASE.

STRICKLAND *v.* KINGWELL.

This case, which come before Vice-Chancellor Bacon, occupied the Court five days.

Mr. Marten, Q.C., appeared for the plaintiff, with him Mr. Nalder; and Mr. Hemming, Q.C., for the defendant, with him Mr. A. Dawney.

The action was brought for an injunction to compel the removal of new buildings said to obstruct the light of the "Grapes" public-house, Red Lion-street, Holborn.

Mr. Kettle, the co-plaintiff, gave evidence as to the difference in the light.

Mr. Fleuret, public-house broker, gave evidence of the value of the premises at the transfer in 1877.

The following surveyors—Messrs. E. L. Blackburne, C. K. Bedells (Lander & Bedells), T. Chatfeild Clarke, and Banister Fletcher—gave evidence on behalf of the plaintiff, explaining the models and plans which had been prepared.

For the defence, the defendant, Mr. F. Kingwell, was examined, and the following surveyors—Messrs. Roger Smith, Henry Lovegrove, Geo. Edwards, F. Lee, and W. G. Coldwell.

The result was, his Lordship issued a mandatory injunction to pull down such portions of the buildings as obstructed the lights of the plaintiff.

WORKHOUSES.

THE Lambeth Workhouse, erected in 1871-2 having become insufficient for the growing requirements of the parish, has been enlarged by the addition of 580 beds, making a total number of 1,350 inmates.

The building was originally designed with a view to its extension, and the system of classification has, therefore, not been interfered with; and, for the same reason, it was not found necessary to extend the administrative department, but only the wards, day-rooms, and dining-halls. The cost has been £28,000. Mr. T. W. Aldwinckle, of 2, East India-avenue, is the architect. It may be mentioned that this was the first workhouse built strictly upon the Pavilion principle, with rigid classification, the able-bodied being divided into three classes for each sex, each class having its own wards, day-rooms, staircases, yards, offices, and workshops; and we understand that, since its erection, this workhouse has been visited by a large number of other Boards of Guardians sent there by the Local Government Board.

The Guardians of the Wandsworth and Clapham Union, at their last meeting, instructed Mr. T. W. Aldwinckle to prepare plans for their new workhouse. The ultimate accommodation is to be for 1,200 inmates, provision for 600 to be erected at the present time.

SMOKE ABATEMENT TESTS.

AN ASSERTED OVERSIGHT.

SIR,—I beg to call attention to a most extraordinary blunder that has taken place in connexion with the testing of grates and stoves at South Kensington. A volume of reports has just been issued, an account of which appears in the *Sanitary Record* of the 15th ult. Mr. Kinnear Clark, the examiner, states, in his report, that each test-house had a circular chimney, 8¾ in. in diameter, which was prolonged by 6 in. zinc piping to a total height of 25 ft. Now, every practical man knows that such a flue is utterly unfit for open fires and bituminous fuel, and fit only for close stoves, to burn gas or anthracite coal.

Hence it is that those modest contrivances for burning coal which could be most safely used for a few hours with a 6 in. pipe, stand highest in the reports and in the awards, and the most successful contrivances, when used with proper chimneys, are simply nowhere.

Hence, also, is the explanation of the remarkable inconsistency which I explained in your number of January 6th.

The exhibitors were no parties to the blunder, as the flues were embedded in brick-work and could not be seen.

It is fair to state that the Smoke Abatement Committee are not entirely responsible. They adopted the test-houses and chimneys used by the Society of Arts in 1873. On that occasion the results were so unsatisfactory that no reports were published and no awards made. The cause of the failure can at last be accounted for. I have not the least idea who was personally responsible for the mistake, but will only say that such a flue embedded in brick is admirably suitable for gas.

In consequence of the unfortunate oversight, an enormous amount of trouble and expense has been incurred uselessly, and, so far as open fires are concerned, the reports and awards possess no value whatever.

As some of your readers may not be as familiar as myself with the subject, I beg to explain that a flue prolonged by a 6 in. pipe is about the same thing as a flue of 6 in. in diameter throughout, and that its effect on all full-sized grates must be to make them act badly in every respect, to be most imperfect in combustion and in heating power, to occasion a concentration in the chimney of noxious products, and to emit some of these into the testing room. The smaller the contrivance the better it would answer.

It appears to me that all the Smoke Abatement Committee can now do is to test the really important grates with proper chimneys.

Captain Douglas Galton and Dr. Siemens have both disclaimed any responsibility for the testing.

FREDERICK EDWARDS.

CONDITION OF HOUSES IN THE COUNTRY.

SIR,—I can quite endorse the remarks in your article last week on the Sanitary Condition of Houses in the country, more especially in remote parts. I knew only some months since of a water-closet immediately over a cesspool, and the covering over it was left quite unsound from the time of one emptying to another, as the local men told me, to avoid the trouble of cutting up the covering every time. In the same house another cesspool was at the back door within a yard; another at one time was outside, but subsequently to its formation a conservatory had been built over it. Another was in the stable yard, and close alongside of it a rain-water tank, the water being often used in the kitchen owing to its being so close to it; otherwise the water in general came from a reservoir sufficiently high to supply the upper stories of the house.

Another case, a most curious one, was a small grocer's and general stores in Kent. From time to time the family had been ill and nothing was suspected, although the water-closet was within the thickness of the wall of the well,—not a spring well, either, but one of the many thought so, but merely land surface-water, otherwise rain-water, filtered through the land. However, alongside this water-closet and further from the well was a store for paraffin oil, and one day some got spilt and found its way in a short time into the well. Luckily for the inmates of the house, the well was at once, I was glad to hear, filled up and the pump taken away, and the drain re-laid. This is only one of the many instances, some fatal, showing that no one scarcely thinks where the wastes go to so long as the refuse goes somewhere.

F. BOTTING.

LIGHT OUT OF DIRT.

SIR,—I am much interested in your article "Light out of Dirt." I made some experiments in 1879 for the treatment of solid garbage and sewage, and I found large volumes of gas given off, which in burning gave out a powerful heat but not much light, though after its purification a brilliant light was obtained equal or superior to gaslight from coal. The process would be quite remunerative, and I am about to carry out some works for a small Local Board district with the object of solving that hitherto unsolved problem,—the profitable utilisation of the sewage,—and when in operation shall be glad to give you the particulars.

E. CLEMENT TRAPP.

THE SUPERINTENDENCE OF BUILDINGS.

SIR,—Being a constant reader of your valuable and interesting journal, I shall be obliged if you will allow me to insert the following comments, referring to some portions of the paper read by Mr. Arthur J. Gale at the meeting of the Architectural Association on the 16th ult., and published in your issue of the 24th ult., and headed "Notes on Professional Practice."

On perusing the paper, I find portions of it refer to clerks of works. On these points (being a practical clerk of works) I am personally interested, and would venture, with your permission, to make a few comments, not in a hostile, but in a friendly, spirit. Mr. Gale says the selection of a clerk of works was a difficult point; for he might prove to be unreliable in many ways: he might drink, or connive at builders' dishonesty; or, if honest and sober, he might be incompetent to perform his duties. I fear this gentleman has been most unfortunate as regards his experience with clerks of works, otherwise the trio of possibilities might be more favourable and complimentary to clerks of works as a body. Mr. Gale goes on to say (continuing the possibilities), an energetic architect's assistant (junior pupil or otherwise) might make a very good clerk of works, especially if gifted with tact and business capacity. I quite agree with

Mr. Gale that the selection of a (practical, qualified, experienced) clerk of works is a difficult point (or has been), but I cannot endorse his view that an architect's assistant (especially a junior pupil) is likely to make a good clerk of works, unless he has had some practical experience in one or another of the mechanical trades in connexion with the building trade. I certainly should not like to be the client whose interest was left in charge of a non-practical and inexperienced junior pupil from an architect's office.

The several branches of the building trade are intricate, and require a lengthened practical experience to gain an insight sufficient to qualify one to discharge the duties of a clerk of works efficiently o the satisfaction of the architect and the client. Perhaps I may here add (without being considered nvidious) that the difficulty of selecting a clerk of works, with the necessary qualifications, is now reduced to a minimum, by the action taken by qualified clerks of works in forming an association, the objects of which are to enable architects requiring the services of a clerk of works to obtain qualified and experienced men who can be relied upon, as having been engaged in that capacity for years, and also to protect their own interests being assailed and brought into disrepute by inexperienced and unqualified persons who endeavour, and sometimes obtain, appointments which they are no more fit to fill than a junior pupil from an architect's office.

Information with reference to the Clerks of Works' Association can be obtained by applying to the secretary, Mr. G. R. Webster, 31, Spring-gardens, Charing-cross, London, S.W.

A MEMBER OF THE CLERKS OF WORKS' ASSOCIATION.

"A DOCTOR'S HOUSE, BEDFORD PARK."

SIR,—Under the above heading, in the *Builder* of 3rd February (p. 139), you notice a visit of the Architectural Association,—"the first visit of the session. Mr. E. J. May, the architect, conducted the visitors over the house, which had been designed upon the principles laid down by Drs. Drysdale and Hayward, at the special wish of Dr. Hogg, as a residence for himself. The principal thing aimed at is to produce a constant flow of fresh air through every room in the house, the air being admitted to the basement, and from thence to every room in the house. From each room one or more separate extracting flues go to a foul-air chamber in the roof, extracted by a flue, which passes up behind the kitchen fire, which provides the suction power for drawing air through the whole house," &c. I beg to inform Mr. May, also the three Doctors, that it is not their design. This principle, and the whole arrangement, were carried out by Messrs. Price, Lee, & Co., 9, Adam-street, Adelphi, upwards of thirty-two years since, with success. I hoped these four gentlemen had honour enough in them not to call it their design, and I shall be glad to hear they informed the members of the society that the design belongs to Messrs. Price, Lee, & Co.

It is better adapted for large public buildings than private houses. We Englishmen do not care to give up our "social hearths." ARCHITECTUS.

CHELTENHAM GAS OFFICES.

SIR,—It is to be hoped that the directors of this Gas Company have at last made a selection of a builder to do the above work. They have not deigned to give the general competitors any information on the subject, and although some of us have by invitation practically sent no less than five tenders for the works, the directors do not appear to have possessed gentlemanly feeling enough to tender their thanks for the trouble taken in the matter.

Our tenders were simply returned to us with the curt remark that they were not accepted. In all my experience this is the most shabby treatment I have ever received, and I find that I am only expressing the feelings of others who have sent tenders. WILLIAM JONES.

SANCTION FOR PUBLIC WORKS.

SIR,—Referring to the paper read at a meeting of the Civil and Mechanical Engineers' Society, and quoted in the *Builder*, "The Process of obtaining Sanction for Public Works in Great Britain," may I draw attention to the description given by me in chap. i., vol. i. of my "Aid Book to Engineering Enterprise," a book which you were good enough to notice? EWING MATHESON.

CHURCH-BUILDING NEWS.

Forest Hill.—The new Church of St. Paul, Forest Hill, has just been opened for worship. It has been built from the designs of Messrs. Herbert D. Appleton and Edward W. Mountford, who were appointed joint architects after a limited competition. The church stands upon a very sloping site, advantage of which was taken to form a Sunday-school under the east end of the church, to hold 300 children. The committee stipulated that every sitting should have an uninterrupted view of the pulpit, reading-desk, and communion table. The length of the church is 120 ft. from the pulpit to the wall at the west end. The chancel is 17 ft. deep. The plan of the church consists of a nave, a north and south aisle, with apsidal chancel. There are four porches entering the church at the west end, all of which are screened by inner lobbies. The general treatment of the church is in the thirteenth century Gothic style, carried out with moulded bricks. The original design contemplated a tower at the west end of the church, but this has not been built, nor is provision made for it. The stained-glass windows in the chancel are by Messrs. Heaton, Butler, & Bayne, and were presented to the church by Mr. James Bissick and Mr. Fielding. The window in the north aisle, by Mr. Steel, is the gift of the architects. The works have been carried out by Mr. W. Smith, of Harleyford-road, Vauxhall.

Milford, near Lymington.—A reredos has recently been erected and other works have been carried out in the chancel of this church from the designs of Messrs. John Colson & Son, architects, of Winchester. The reredos, which is composed of various coloured marbles, alabaster, and stone, consists of five deeply-recessed panels with moulded and crocketed gablets, the centre considerably elevated, supported by clustered marble columns of various colours, the centre column of the cluster supporting central gablet being of a spiral form executed in Rosso Antico marble. The bulk of the work is executed in veined alabaster; the foliage to the capitals, spandrels in gablets, bosses, and the figures of angels at the intersections of the gablets, being delicately carved in white alabaster. The central panel contains a vesica of inlaid Devonshire marbles, with a gold ground and across of Penzance red serpentine decorated with Florentine alabaster, Chilian lapis, agate and Derbyshire spar. The remaining panels are filled with the figures of the four evangelists executed in glass mosaics by Mr. Powell, of London. The retable is in Devonshire marble moulded, and supported by Purbeck marble moulded brackets. The lower part of the reredos is in Caen stone, with Purbeck marble columns at angles. The remaining works consist of new oak choir desks and stalls, oak ceiling, encaustic tile paving to the sacrarium by Mr. Godwin, of Lugwardine and Poole; paving to the remainder executed by Mr. Pilley, a local builder. The sacrarium steps are executed in red Mansfield stone, and the step to the altar platform in polished Irish red marble by Mr. W. Earp, of London, who also executed the reredos. The reredos and work in the sacrarium has been presented by a parishioner, the cost of the remainder being defrayed by subscription through the vicar, the Right Rev. Bishop McDougall.

Duloe.—A new reredos has just been dedicated in Duloe Church, near Liskeard, Cornwall. In 1862 the church at Duloe was carefully restored, under the direction of Mr. J. P. St. Aubyn, architect, and at the expense mainly of the rector and of the Rev. Thomas Bewes, the principal landowner in the neighbourhood. The remains of the rood, and the fine parclose screen on the north side of St. Cuby's are good specimens of carved oak of fifteenth-century work; and in the sculptured and masonry work of the Bewes' Chapel a striking similarity exists to work in the choir of Exeter Cathedral. The reredos just erected extends the full width of the east end, from the north wall to the south. The main portion, immediately behind the altar, is made altogether of polished alabaster and Cornish serpentine. It rises to the height of the east window, only cutting slightly into the painted decorations of the latter with the central gable. The re-table is of moulded and polished Cornish serpentine, beautifully veined. The central compartment contains a representation in sculpture of the Crucifixion. The figures are in high relief. In striking contrast to this central group are the two side panels, which are quietly diapered. The cornice is boldly moulded and carved, and the whole work is surmounted by a cresting of pierced work. The wings at the north and south of the reredos proper are, in the main, of Beer stone; their columns, however, like those of the central part, are of polished serpentine. This reredos has been carried out by Mr. Harry Hems, of Exeter.

Shirley.—The Bishop of Worcester has reopened St. James's Church, Shirley, Birmingham, after its enlargement and renovation. The original building consisted of a nave, with small side porches, tower (in which was the vestry) at one end, and a shallow recess or chancel at the other end. The funds at disposal being limited, and the chief object being to provide more sittings to satisfy the requirements of an increasing local population, the whole body of the church or nave has had little exterior attention, but internally the side galleries have been removed, the end gallery altered and adapted for children, a bold arch turned to open up the lower part of the tower to the nave, and convert what was formerly the vestry into a baptistery. The additions consist of the erection at the old chancel end (which has been altogether removed) of large transepts and a well-proportioned new chancel, with organ-chamber and vestry on one side. Under the vestry has been fixed a new warming apparatus by Messrs. Haden, of Trowbridge. The organ has been removed from the end gallery, and reset up in the new organ-chamber, after having been repaired and set in order by Mr. Hewins, of Stratford-on-Avon. The church, with the new additions, is now of a cruciform shape, the transept being connected with the old nave by a bold new moulded brick arch, of a span nearly equal to the width of the old nave. The transepts are opened to the body of the church by arcades of two arches, each springing from carved wall corbels, and centrally supported on a moulded brick pier. A bold moulded brick arch also opens up the chancel, wherein double rows of seats on either slide have been provided for the choir, ended on one side by the pulpit, and on the other by the prayer-desk. The additions have been built almost entirely of local red bricks, neatly pointed; Greensill stone having been used for copings, tracery, and exposed weatherings, and Codsall stone for the window-sills. The internal stone-work, corbels, springers, &c., are done in Corsham Down Bath stone. The new roof, which is open-timbered in the interior and plastered and coloured between the rafters, is covered with purple plain tiles, and is of a steeper and better pitch than the flat slate roof over the old nave. The windows are filled with cathedral tinted glass in lead lights (squares and diamonds), floriated pattern work being inserted in the tracery heads, and hopper casements being employed where necessary for air and ventilation. One of the transept-lights has been filled with stained glass by Messrs. Camm Brothers, to the memory of certain deceased members of the Terry family. The whole of the additions have been designed in the Early English or First Pointed style of Mediæval architecture. The corbels and label terminations, &c., have been carved by Mr. Roddis, of Birmingham. The cost of the additions and improvements has been about 1,500*l*. Mr. John Cotton, of Birmingham, was the architect; and Messrs. Bragg Brothers, of Solihull, were the builders.

DISSENTING CHURCH-BUILDING NEWS

Sunderland.—The Grange Congregational Church, the memorial-stone of which was recently laid, is really the second half of a building designed by Mr. Pritchett, of Darlington, the first half of which was erected in 1881, and which we described at the time. We may, however, briefly note that the portion already built comprises schools on a novel plan, forming half of a decagon externally, and internally having class-rooms ranged round a central room, from which they are separated during teaching hours by revolving shutters, but forming with the central part one room when the shutters are up. The church, now in course of erection, joins on in front of the above-named schools, making one building about 135 ft. long externally. The front faces Stockton-road, and has on the ground-story three doorways, having polished red granite shafts, moulded bases and arches, and carved capitals. The tower is at the corner of Stockton-road and Candlish-terrace, and the tower is 65 ft. high, designed in five stages, and surmounted by a spire rising to a height of 135 ft. from the causeway to the top of the vane. The side elevation to Candlish-terrace is relieved by being broken into parts, the corner having an apsidal staircase against the tower, the end portion next the schools being arranged as a transept with double gables, and the portion between, forming the aisles, being considerably recessed. The ridge of the roof is continuous in the church and school, 65 ft. high from the ground. About the middle of its length is an ornamental "Flêche," or turret, of oak, lead, and slate, rising to a height of 90 ft. from the ground. This turret is to contain an apparatus for extracting the foul air from the building. The church will consist of a nave, 32 ft. wide, separated from the aisles, each 10 ft. wide, by iron pillars, in two tiers, supporting the side galleries and main arcades. The pillars will

have moulded bases and foliated caps, and the arches will be of moulded woodwork. From the arcades rises a moulded wagon-headed roof, groined in the lower portion between the arcades and the hammer-beams. This roof, and, in fact, all the woodwork, is to be of best pitch pine varnished. On the top of the first tier of pillars runs, all round, the gallery front, which is of handsomely-moulded tracery-work, deeply recessed. The seats are all 2 ft. 10 in. from front to back, and, allowing 20 in. full for each person, will accommodate 925 adults; but by an arrangement of seats to slide out into the gangways from the ends of the fixed seats, 1,053 adults (or about 1,200 persons, reckoning the usual proportion of children and young persons) can be seated on special occasions. The glazing is to be by Mr. Atkinson, of Newcastle-upon-Tyne, in his *spécialité* of "Muffled" glass, with coloured "roundels" and "borders" in the body of the windows, and foliated designs in the tracery. The warming is to be by Weeks & Co., of Chelsea, with the introduction of their "Hydro-Caloric Coils." The building is designed by Mr. J. P. Pritchett, architect, Darlington, and is being carried out under his supervision, assisted by Mr. Bryan as resident clerk of works. The contractors for the whole of the works, except the heating and the glazing before named, are Messrs. Hirst & Sons, of Darcy-street, Sunderland. The contracts, together amounting to about 6,500*l.*, which, added to the cost of schools, — about 2,500*l.*,—will, with professional and furnishing charges, make the total cost of the whole scheme not far short of 10,000*l.*, exclusive of site.

STAINED GLASS.

Tickhill Church (*Yorkshire*).—The large five-light east window of this fifteenth-century church has, by the liberality of the Misses Alderson, of Tickhill, been filled with painted glass in the style of that period. The lights are divided so as to allow of an increased number of illustrations. In the upper and larger range the central subject, on a cerulean blue ground, is the Ascension. No canopy surmounts this light, but instead, there are indications of the glory into which the Lord is ascending; whereas all the other subjects are surmounted by rich and elaborate fifteenth-century canopies. The other illustrations on this range are the Marriage Feast at Cana, Christ teaching in the Synagogue, Christ sending forth his disciples to preach the Gospel, and Christ blessing little children. Of the five smaller compartments in the lower range the central three are devoted to the Last Supper, flanked by illustrations of the Parables of the Good Samaritan and of the Wise and Foolish Virgins. The tracery lights above are richly foliated in grisaille, upon green and ruby grounds. Beneath each subject is an appropriate legend text; and at foot of the whole an ornamented base and an inscription of the donors' names. The work is rather special in some of its characteristics, more notably of colour. In the upper range the ground colours are alternately blue and ruby, whilst a silvery white or grisaille predominates in the treatment of the figures and their accessories. In the lower range, ruby on each side flanks the central blue. Of the canopies, the grounds are alternately ruby and green, the latter surmounting ruby beneath, and ruby surmounting blue. The colours are thus so opposed as to complement each other at once richly and harmoniously, yielding, nevertheless, to the subject compositions, their due and distinct prominence. The window is by Messrs. Powell Bros., of Leeds.

Lymington. — A stained-glass window has recently been placed in Milford Church, Lymington, in memory of the late Lord Justice Thesiger. It is a two-light window, and contains figures of Moses and St. John the Evangelist. The artists are Messrs. Warrington & Co.

Discovery of Red Ruabon Terra-cotta Marl.—An immense bed of superior red marl, sixty-four yards deep, has been recently discovered at Ruabon, and, we believe, secured by the well-known firm of Messrs. Monk & Newell, Liverpool, who will commence the manufacture of terra cotta, &c., upon a large scale forthwith. We learn, too, that the firm has taken into partnership the well-known manager of the Penybont Works,—"the originator of Ruabon (deep red) terra cotta,"—who undertakes the practical management of the business.

VARIORUM.

"THE Booke of Entries of the Pontefract Corporation, 1653-1726" (Pontefract, Richard Holmes), appears to be the oldest record of the Pontefract Corporation known. It has been edited with care and intelligence by Mr. Holmes, and includes much interesting matter. ——The lecture on the Future of Electric Lighting, delivered by Mr. St. George Lane-Fox at the Royal United Service Institution, has been printed in a separate form. Mr. Lane-Fox maintains the certainty that the uses of electricity will spread, and we agree with him in this; but holders of gas shares need not be in any hurry to sell them, for all that.——Mr. Batsford announces the early publication of "A Complete Account, illustrated by measured Drawings, of the Buildings erected in Northamptonshire by Sir Thomas Tresham between the years 1575 and 1605, together with many Particulars concerning the Tresham Family and their Home at Rushton," by Mr. J. Alfred Gotch, architect. ——An article appears in the March number of the *Bibliographer* on the "Book Prohibitions of the Church of Rome," which have continued for 300 years,—from the destruction of Luther's writings to the present time.——The *Leisure Hour* thus instructs its readers what to do in case of fire:—"In case of either a chimney or a room catching fire, the first thing to be thought of is to exclude all draughts; for it is certain that the slightest current of air will increase the force of the fire. All the doors and windows should be shut at once, and if the chimney be on fire, a wet blanket should be immediately fastened to the top of the mantelpiece, so as to exclude all draughts from the opening of the chimney, and entirely cover the grate; shutting the trap first if possible. This will in most cases make the fire go out by itself. You may throw into the grate a few handfuls of salt. Water should never be thrown down from above, as it spoils the carpet and furniture unnecessarily. A very common cause of fires will be found in the careless sweeping of the chimneys, the sweep's neglect of putting the brush up out of the top of the chimney, thus leaving a cake or ceiling of soot, which either catches fire or comes down some night with disastrous consequences. If the window or bed curtains catch fire, beat them with the thickest woollen garment you can lay your hands upon. Window-curtains can in most cases be torn down with a violent jerk, and this will prevent the flames from extending to the woodwork of the windows. In escaping from a burning house or room, remember that the air nearest the floor is clearer than any, and go on your hands and knees at once. A wet cloth tied over the mouth and nose keeps out the smoke, will help the breathing, and prevent suffocation if too much oppressed. A wet blanket, or even a dry one speedily used, will extinguish many a small conflagration, such, for instance, as of an upset lamp, by excluding the air; and will be far more efficacious than water thrown on for that purpose; its use also prevents damage to furniture. When an alarm of fire is given, if in bed, wrap yourself in a blanket, which will form the best protection for you from the chance of ignition, and endeavour to remember the different exits from the house, where they are, and how to reach them; if you cannot attain to any of them, try to get to a front room as near the ground as possible."

Miscellanea.

The Churchyard of the old parish church of St. John, Bermondsey, has been opened as a recreation-ground, and dedicated to the public in the presence of the parish officials and a large number of the inhabitants. The churchyard, which is a very large one, has been laid out into walks and flower-beds, and the tombstones removed to a place of safety, and a reference plan prepared showing the exact spot from which each stone was taken. An old watchhouse, situated at the entrance, has been transformed into a lodge for the caretaker.

The School Board of Tottington Higher End have decided to build a new school for 160 children, upon a site at Townsend-fold, Rawtenstall. In a limited competition, the plans of Messrs. Maxwell & Tuke, of 29, Princess-street, Manchester, have been selected, and the work is to be carried out as soon as possible.

Halifax School of Art.—The prizes and certificates gained by the students of the Halifax School of Art during the past year were distributed in the school at the Mechanics' Hall. Mr. Fox, the secretary, read a letter from Mr. G. Marchetti, the president, who had promised to distribute the prizes, stating his inability to be present on account of indisposition. Mr. Cochrane, a member of the committee, was then voted to the chair. Mr. Stopford, the head master of the school, gave a few particulars of the examinations during the past year. In the second grade, forty-nine papers had been successful, and five prizes had been obtained for papers marked excellent. There were also four certificates granted to students who had passed in all subjects in that grade. In the national competition two Queen's prizes had been obtained, and ten third-grade prizes, nine being for subjects in design. Mr. Stopford said that in a school of that character design was a very important element, and he scarcely thought that the system adopted by the Science and Art Department was one calculated to develop design. In connexion with their schools works of a promiscuous and incongruous kind were sent up, on which the students had to be examined at Kensington. The student was anxious to send a design to Kensington, but they were placed at a disadvantage in not having any knowledge of the principles and elements of ornamentation. He had suggested to the Department that they should institute elementary examinations in the schools in the elements and principles of ornamentation, and also in the historic periods. It was his intention during the winter to take advantage of the liberal prize money which the president had given them to have examinations in those subjects. He purposed giving a series of lectures during the next term on the elements and principles of ornamentation, and also upon the historic period of ornamentation. Mr. Stopford then alluded to the increase in the number of students, which had made it impossible for the students to work well in a room of that size. Mr. Cochrane briefly addressed the students before distributing the prizes. He agreed with the remarks made by Mr. Stopford with regard to the existing system at South Kensington, but stated that within the past few years improvements had been made, but he believed there was room for still further improvement. One matter to which he would like to refer was the amount of time which he believed was wasted in sketching from the round. He had himself derived more technical instruction from nature than from sketching from the round. Mr. Cochrane then distributed the certificates and prizes to the successful students.

Arbitrators and Property Assessments. A deputation has had an interview with the President of the Board of Trade on the appointment of arbitrators to assess the value of property to be taken for public works. The deputation, which was introduced by Mr. Jacob Bright, M.P., consisted of Mr. Arnold Morley, M.P., Mr. Whitley, M.P.; Messrs. Grundy, Pattison and Talbot, of Manchester; and Mr. Pritchard (Sharp, Parkers, & Co., solicitors to the Association of Municipal Corporations). It was represented that considerable abuse had grown up around the present methods of arbitration, which were said to be both dilatory and expensive, and it was suggested that a similar system in the case of railways acquiring land should be adopted, namely, the appointment of an umpire by the Board of Trade. This the deputation believed would be more satisfactory to all parties. Mr. Chamberlain, in reply, said that he was perfectly familiar with the abuses that had grown up under the present system; but, although he doubted the ability, or even the propriety, of the Government introducing a measure upon the subject, he gave them his most cordial support, and would speak in the House in favour of such a change, if such a Bill should be introduced at the instigation of the Municipal Corporations Association. The deputation then withdrew.

Peterborough Cathedral.—The first of a series of public meetings in aid of the Peterborough Cathedral Restoration Fund was held on Wednesday, under the presidency of the Mayor of Peterborough. It was announced that Earl Fitzwilliam, who was present, had contributed 1,000*l.* A detailed statement was made by Dr. Perowne, the dean, and resolutions were carried approving the action of the Dean and Chapter. The total subscriptions amount to 11,000*l.*, towards 55,000*l.* required.

Arsenical Pigments.—The Foreign Office has, at the request of the National Health Society, addressed a communication to its representatives abroad desiring them to report on the existing legislation in Continental countries with reference to the precautions and restrictions imposed on the manufacture and sale of articles in which arsenical pigments are employed. A committee, including Dr. Lauder Brunton, F.R.S., Professor Heisch, F.R.S., Dr. Farquharson, M.P., Dr. Cameron, M.P., Lieut.-General Cotton, C.S.I., Mr. J. Hogg, Mr. Carr, Mr. J. C. Whittle, and Mr. Ernest Hart (chairman), has been formed in connexion with the Society for investigating the subject of arsenical poisoning in respect to the use of arsenical pigments, paperhangings, dress fabrics, and other materials in daily use, and their deleterious effects on health. Reports have been prepared by Dr. Lauder Brunton, F.R.S., and Professor Heisch, F.R.S., on the medical, chemical, and sanitary aspects of the question, and a Bill has been drafted with the object of requiring that in the case of articles manufactured with arsenical pigments, due notice should be given to the purchaser. A considerable body of information was laid before the committee, showing that the use of arsenical pigments was not confined, as was popularly supposed, to the preparation of green colours, but that numerous cases of arsenical poisoning had occurred in families living in rooms hung with mauve, red, fawn, and other coloured paperhangings, in which arsenic was freely used, and from which arsenical powders floated into the air.

Gas and the Electric Light.—The annual dinner of the members of the Gas Institute was held at the Crystal Palace on Tuesday evening, Mr. Paterson, the president, in the chair. After the disposal of the usual loyal toasts, the chairman proposed the health and prosperity of the directors of the Crystal Palace Company. Mr. M'George, in responding, alluded to the sectional exhibitions which had been established at the Palace, and stated that from the 1st of January up to the present time the number of visitors to the palace had considerably exceeded the number in the corresponding period, when the electrical exhibition was going on. Sir J. Douglass, in reply to the toast of the assisting exhibitors, referred to the rivals which gas had in mineral oil and the electric light, and observed that, great as had been the progress of gas, it had been still more decided since the introduction of the electric light. Mr. Denny Lane proposed the health of the executive committee, and observed, after referring to the progress of gas and electricity, that there were certain laws of nature which could not be overcome. Thus, out of a certain amount of motive force more than a given amount of electricity could not be produced. If electricity could give better service than gas, let them welcome it. It had certainly been one of the greatest stimulants to the gas industry.

Proposed Exhibition at Boston, U.S.—The prospectus and rules which are to govern the forthcoming exhibition of foreign arts, products, and manufactures, to be held at Boston, Massachusetts, in September next, have been issued. The exhibition is to take place under the auspices of the Massachusetts Charitable Mechanic Association, and is to consist exclusively of foreign exhibits. It will remain open for three months. The building in which the exhibition will be held is centrally located, and of easy access from all parts of the city. It has been erected at an expense of over half a million dollars, and is constructed solely for exhibition purposes. There will be no charge for space. Medals and diplomas will be awarded to exhibitors.

District Surveyors' Fees.—A return has been issued by the Superintending Architect of the Metropolitan Board of Works, Mr. George Vulliamy. Compared with the results of former years, the present abstract shows an increase in the number of works. In 1856 there were 14,654 separate building operations, the fees in respect of which amounted to 19,904*l.*; in 1881 the buildings numbered 29,275, and the fees were 51,383*l.*

More Cards.—S. Hildesheimer & Co., not content with their successful issue of Christmas cards, have sent us a box containing a large collection of Easter cards, wedding-cards, and birthday-cards, not to speak of valentines, the time for which has just now passed. We can say a good word for these, as we did for their other cards.

The Lytham Commissioners and the Ribble Scheme.—A deputation from the Lytham Commissioners has had an interview with the Ribble committee of the Preston Corporation, with the object of obtaining some further information with respect to the effects of the development of the river, as proposed, upon the foreshore of Lytham, and the flow of the tide thereto. The deputation produced a plan of the river, which turned out to be at least twenty years old, and in no way representing the present channel of the river, and it appeared that their study of this old plan had quite misled them. Of the north training wall proposed to be erected by the corporation, they had an impression that it would be visible from 6 ft. to 8 ft. above low water, whereas it will, in fact, be 2 ft. below the present sand bed, and therefore not visible at any time. With respect to the sewage of Lytham, the commissioners suggested that the Corporation of Preston should carry it away for them, as it would not be allowed to enter the Ribble after its development, and as the cost of doing so would only be from 4,000*l.* to 5,000*l.* To this proposition the committee replied that Lytham must dispose of its own sewage, and on no account would it be allowed to be turned into the river. Preston would also have to find some other way of disposing of its sewage. It is understood that the Lytham Commissioners have now given up all notion of opposing the Ribble scheme.

St. Chad's Schools, Birmingham.—On the 5th ult. Councillor Hardman laid the foundation-stone of St. Chad's new schools, in Shadwell-street, Birmingham. Hitherto the accommodation for the children attending the Roman Catholic schools at St. Chad's Hall, in Bath-street, has been very deficient, and as the building was also in a dilapidated condition, it was deemed advisable to erect new schools sufficiently commodious for the requirements of the district. A piece of land in Shadwell-street, adjoining the cathedral, was acquired, and here it is proposed to build schools to accommodate 700 children. The building, which is to be in the Gothic style, will be 95 ft. long and 25 ft. wide, and will have a frontage to Shadwell-street of 66 ft. On the ground-floor is to be a large infants' schoolroom, and two class-rooms; while on the next floor a large schoolroom and two class-rooms will be provided for the girls. The boys, it may be stated, are provided for in a school further along the street. In addition to the new schools, two sacristies, one for the choir and the other for the clergy, adjoining the cathedral, will now be built. The plans have been prepared by Mr. G. H. Cox, architect, Temple-street, Birmingham; and the contract has been taken by Mr. Thomas Robotham, builder, Great Francis-street, Birmingham. The total cost of the building will be about 4,500*l.*

Manchester Ship Canal.—The Standing Orders Committee of the House of Commons will this Friday consider the Examiner's report on this Bill. Over 300 petitions from public bodies, chiefly in Lancashire, Yorkshire, and Cheshire, but many of them from other parts of the country, have been presented to Parliament in favour of the suspension of the Standing Orders, so that the merits of the Bill may be considered by a Select Committee of the House of Commons. The petitioners comprise municipal corporations, local boards, chambers of commerce, bankers, merchants, manufacturers, and ratepayers in the counties mentioned. About 200,000 signatures have been appended to the petitions presented to both Houses, all of which were obtained in less than ten days. It will be remembered that the Examiner decided that the Standing Orders had not been complied with, on the ground that plans and estimates of the proposed works for the upper estuary of the Mersey had not been deposited, the argument of the promoters being that they had not taken this course because they were not desirous of over-riding the powers of the River Mersey Conservancy. The Promoters sought powers by their Bill to enter into arrangements with the Conservancy to enable that part of the works to be carried out under their authority and control.

A Contract.—We understand that Messrs. Durnford & Son, contractors, of Bristol, have been successful in securing the contract for lowering the bed of the river at the new Clyse, Highbridge. About 1,400*l.* is the amount of the contract.

Safety in Theatres.—It is proposed by Mr. Dixon Hartland, M.P., to abolish the jurisdiction of the Lord Chamberlain and magistrates as to granting licences to theatres, music-halls, &c., and to place all places of amusement "under the department" of the Home Secretary. The Bill for this purpose directs the Home Secretary to frame regulations for the establishment of decency and order in these places, and for insuring the safety and accommodation of the public. Further, he is empowered to appoint inspectors, whose duty would be to survey and continuously inspect all places of amusement, and report as to the observation of the regulations, and as to the stability of structure, due security against fire, and facilities of ingress and egress.

Proposed New Railway to the Crystal Palace.—At a meeting of residents in the neighbourhood of Forest-hill, it was resolved,—"That, considering the large number of inhabitants, and the continued growth of the population in this district, whose business required them to have daily intercourse with London, it is desirable that increased facilities should be given by railway accommodation to all parts of the metropolis, and that the proposed railway from the Crystal Palace by way of Ladywell, East London, Cannon-street, and Charing-cross, which would open up a new route, would be of great advantage in this district, and confer an immense boon upon many thousands in London, who could then more easily and cheaply visit the Crystal Palace."

TENDERS.

For goods warehouse at Strangeways, near Hindley, for the Wigan Junction Railways. Mr. Charles H. Beloe, M.Inst.C.E., engineer. Quantities supplied:—

T. & R. Stone, Newton-le-Willows	£1,053 0 0
J. Preston, Wigan	1,000 0 0
J. Wilson, Wigan	998 7 6
A. Haughton, Godley	980 0 0
W. Winnard, Wigan	976 13 0
C. B. Holmes, Wigan (accepted)	970 0 0

For the erection of new stables and coach-house, Essex-road, for Mr. Wilkinson. Mr. Walter J. N. Tomlinson architect, 35, Great James-street, Bedford-row:—

Crowne Bros.	£675 10 0
W. T. Niblett	520 0 0
J. P. Groome	500 0 0
D. D. & A. Brown	490 0 0
R. Henderson	478 0 0
Dayman & Co.	473 11 6
W. F. Quirk	469 0 0
J. Bartram	460 0 0
W. Perkins	459 0 0
Langler & Pinkham	437 0 0
G. Howard	426 0 0
W. T. Parsons	421 0 0
W. R. Cubitt (accepted)	420 0 0

For hall and reading-room, Bermondsey New-road. Mr. J. Cubitt, architect. Quantities by Messrs. J. E. Goodchild & Son:—

Dove Bros.	£5,285 0 0
Burman & Son	5,197 0 0
Woodward	4,989 0 0
J. & J. Greenwood	4,820 0 0
Shepherd	4,793 0 0
Higgs & Hill	4,664 0 0
Holliday & Greenwood	4,655 0 0
Tarrant & Son	4,630 0 0
W. Johnson, Wandsworth Common*	4,600 0 0

* Accepted.

For the erection of dwelling-houses and business premises in Lower Kennington-lane, for Mr. W. C. Wayre. Mr. Banister Fletcher, architect:—

Newstead	£5,520 0 0
Cannon & Mullins	5,484 0 0
Burman & Sons	5,442 0 0
Julian & Co.	5,320 0 0
Starling	5,224 12 10
Rice (accepted)	4,869 0 0
Priestly (too late)	4,811 0 0

For the erection of new warehouses, Dunning's-alley, for Messrs. Reynolds & Eason. Mr. Banister Fletcher, architect:—

Bennett	£4,415 16 5
Boyce	3,880 0 0
Castle Bros.	3,875 0 0
Garrud	3,731 0 0
Merritt & Ashby	3,533 0 0
Steel Bros.	3,414 0 0

For alterations at The Old Red Lion, Kennington Park-road. Mr. Banister Fletcher, architect:—

Burman & Sons (accepted)	£110 0 0

For iron doors, for Messrs. Maple & Co., Tottenham court-road. Mr. H. Woodzell, architect:—

G. Baker & Son	£632 0 0
Cottam & Co.	555 0 0
Lindsay & Co.	537 0 0
Waygood & Co.	506 0 0

For hydraulic lift and cranes, for Messrs. Maple & Co., Tottenham-court-road. Mr. H. Woodzell, architect:—

Smith & Stevens	£575 0 0
Turner & Co.	519 15 0
Waygood & Co.	512 10 0

For the erection of offices in Eastcheap. Mr. Brown architect:—

Foster	£2,375 0 0
Ellis	2,334 0 0
G. Crabb	2,236 0 0
G. Watson (accepted)	2,149 0 0

For road and sewer works on the United Land Company's Kilburn House Estate, Edgware-road, Kilburn :—

Wilkes & Co.	£7,959	0	0
P. E. G. Pound	7,824	0	0
J. Sheppard	7,350	0	0
W. Harris	7,140	0	0
W. J. Botterill	6,862	0	0
J. G. B. Marshall	6,594	10	0
Beadle Bros.	6,572	0	0
E. & W. Iles	6,495	0	0
Nowell & Robson	6,415	0	0
J. Jackson	6,222	0	0
J. Pizzey	6,221	0	0
Rowland Bros.	6,160	0	0
C. Taylor	6,100	0	0
R. Finnegan	5,973	0	0
F. Colepeper	5,737	8	0
C. Killingback	5,587	0	0
W. Nicholls	5,555	0	0
Neave & Son	5,345	0	0
G. Felton (accepted)	5,176	0	0
J. Cardus	4,982	0	0

For road and sewer works on the United Land Company's Hurlingham Estate, King's-road, Fulham :—

J. Sheppard	£1,600	0	0
J. Pizzey	1,589	0	0
J. G. B. Marshall	1,462	0	0
C. Taylor	1,425	0	0
W. Harris	1,397	0	0
J. Jackson	1,369	0	0
Nowell & Robson	1,355	17	0
Wilkes & Co.	1,307	0	0
W. Williams	1,247	13	0
J. Cardus	1,145	0	0
J. Bell	1,115	0	0
W. Nicholls	1,111	0	0
No name	1,092	19	0
Saunders & Co. (accepted)	811	17	0

For making and sewering certain roads on the Cann Hall Estate, Stratford, for the Imperial Property Investment Company (Limited), 57, Moorgate-street :—

Dunmore	£1,379	0	0
Nicholls	1,371	0	0
Bloomfield	1,277	0	0
Bell	1,239	0	0
Jackson, Stratford	1,234	0	0
Jackson, Leyton	1,175	0	0
Pizzey	1,125	0	0
Wilson, Walthamstow (accepted)	1,056	0	0

For the erection of a detached villa, Trinity-road, Hernehill. Mr. W. H. Milnes, architect, 5, Westminster-chambers, Victoria-street :—

Holliday & Greenwood (accepted)	£1,200	0	0

For alterations and additions to warehouse, Little Orford-street, Norwich. Mr. Edward Boardman, architect :—

Wegg	£1,260	0	0
North	1,086	0	0
Wilkin	1,078	0	0
Hall	1,068	0	0
Hawes	1,000	0	0
Downing & Son	975	0	0
Youngs (accepted)	935	0	0

For a block of private wards, at the London Fever Hospital. Mr. Keith D. Young, architect. Quantities by Mr. Morgan H. Young :—

Holland & Hannen	£2,300	0	0
Colls & Sons	2,295	0	0
G. S. Williams & Son	2,125	0	0
Dove Bros.	2,087	0	0
Adamson & Sons	2,025	0	0
Hall, Beddall, & Co. (accepted)	1,773	0	0

For residence, Crescent-road, Tunbridge Wells. Messrs. H. H. & E. Cronk, architects. Quantities supplied :—

Barnett, Shortlands	£3,485	0	0
Kemp, Aldershott	3,246	0	0
Judd & Young, Tunbridge Wells	3,235	10	0
Elwig, Tunbridge Wells	3,188	10	0
Grover, Tunbridge Wells	3,180	0	0
Strange & Sons, Tunbridge Wells	3,087	0	0
Foster & Dicksee, Rugby	2,995	0	0
Bingham, Headcorn	2,987	0	0
Penn, Banbury	2,978	19	0
Swain, London	2,955	0	0
Hann & Co., Windsor	2,942	0	0
J. O. Richardson, Peckham	2,882	0	0
Longley, Crawley	2,880	0	0
Wallis & Clements, Maidstone	2,790	0	0
Kingerlee, Banbury	2,720	0	0
Paramor & Son, Margate	2,680	0	0
Morris, East Grinstead	2,660	0	0

For the erection of barrrack buildings and quarters, comprising twenty-two residences, for the directors of the Hertford Militia Barracks Company (Limited). Messrs. Smith & Austin, civil engineers, Hertford. Quantities supplied :—

	No. 1.	No. 2.
J. Garlick, Birmingham	£4,850	£5,620
Gibbons & Co., Buntingford	4,430	4,970
Willmott & Sons, Bassingbourne	4,043	4,375
Vernon, Ewens & Co., Cheltenham	3,700	4,350
Wade & Edey, St. Neot's	3,750	4,035
Messrs. Hampton, Hoddesdon	3,372	4,298
Whitehead & Jacklin, Royston	3,400	4,110
C. Miskin, St. Alban's	3,320	4,000
W. Gray, Hertford Heath (withdrawn)	3,930	3,250
Spencer, Atherstone	3,120	4,000
Ekins & Son, Hertford	3,200	3,900
Rayment & Sons, Hertford	3,104	3,935
O. E. Gibbons, Ipswich	3,150	3,850
H. Norris, Hertford (accepted)	2,900	3,680

Accepted for water-works for the Rural Sanitary Authority of Towcester, Northamptonshire. Mr. John Enuson, engineer :—

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The Glenfield Company, Kilmarnock.

For the erection of a detached villa, Knollys-road, Streatham, for Mr. S. Alderton. Mr. W. H. Milnes, architect, No. 5, Westminster-chambers, Victoria-street. Quantities by Mr. Walter A. Williams :—

Holliday & Greenwood	£995	0	0
Hoskins	899	0	0
Williams	881	0	0
Gillett (accepted)	850	0	0

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